ABSTRACT OF A

Clinical Lecture

ON

A CASE OF STRANGULATED HERNIA INTO THE POST-CÆCAL POUCH.

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GENTLEMEN,—I hold as a general rule that the subjects for clinical lectures should be chosen from the injuries and diseases which are most commonly met with in practice. Lectures on accidents which you are never likely to see are rarely of great value. But every now and then cases occur which are of very great interest not only from their rarity but from the significance of the clinical symptoms they present, and these when they do occur should not be passed by. The case I am now about to describe is, so far as I can ascertain, unique.

The patient in this instance was a slightly built and rather feeble man, 40 years of age, who was admitted into the Gloster Ward of the London Hospital on Friday, Dec. 2nd, 1898, suffering from abdominal pain. On the previous Tuesday he had been suddenly seized with pain of a griping character in the epigastrium. Vomiting set in on the Wednesday and had continued ever since. His bowels had not been opened and he had not passed any flatus. The abdomen, according to his own account, had been more distended than it was when he was admitted into the hospital and had been quite hard. The pain was not so severe as it had been and when he was examined in the hospital it was chiefly localised in the right iliac fossa. The right testicle was distinctly drawn up, but the pain did not descend into it. He volunteered the statement that he had suffered from four previous attacks of a similar character, that there had been vomiting and constipation in each instance, and that everything had subsided on the previous occasions in the course of two or three days without leaving any ill result. The patient's aspect was not suggestive of any severe abdominal trouble. The eyes were not sunken or the features drawn. The tongue, however, was dirty and inclined to be dry, and the pulse was 98 though fair in volume. Respiration was abdominal but the patient had been the subject of spinal disease in the mid-dorsal region and there was some deformity and fixation of the thorax.

On examination the abdomen was found to be moderately distended. Except in the right iliac fossa it was soft and resonant on percussion. It was sensitive to pressure but was not tender. In the right iliac fossa there was more resistance and on palpation a fairly well-defined swelling could be felt rounded above, and not reaching higher than the umbilicus. Pain in McBurney's spot was not marked. Per rectum there was a soft bulging mass in front and on the right side. The patient was admitted into the hospital in the morning and there was no vomiting on that day and the bowels acted twice after enemata though the motions were small.

The diagnosis was epityphlitis—that is to say, inflammation around and perhaps originating from the appendix—with considerable local effusion and some general peritoneal irritation. This, however, from the patient's own account, was less than it had been. It was the fifth attack and this was the fourth day of the attack. The symptoms appeared to be subsiding. It was a case for operation. Probably there was suppuration though there was no œdema of the skin or fluctuation and the temperature was normal, but it was not immediately urgent. On Dec. 4th the patient was sick three times and on the last occasion the vomit was distinctly offensive. In spite of this he wished to go out and declined to have anything done. The bowels had acted once but the motion was even smaller this time; the swelling in the right iliac fossa was not so large and the tenderness was certainly less. With some difficulty he was persuaded to stay in. The following morning the vomit was distinctly offensive, the abdomen was more distended than it had been since admission, and the patient having given his consent an operation was performed in the afternoon.

On opening the abdomen the surface of the intestine was seen to be reddened and to have lost its polish, but there was no lymph or pus. The distension was only moderate in degree. On passing the finger down towards the cæcum a ring was felt around some intestine. It faced inwards towards the middle line and slightly downwards. The finger-nail passed easily underneath it and at once some brownish offensive fluid similar in appearance to that which he had vomited on the last occasion began to escape. The general cavity was at once packed off with iodoform gauze, a large drainage-tube was inserted through the wound down to the opening, and the wound was left widely open. The patient whose pulse had become very bad during the operation never rallied and died the same day.

At the post-mortem examination a loop of the ileum was found lying in a sac behind the cæcum communicating with the general abdominal cavity by an opening a little more than an inch in diameter. The ileum had ulcerated through and there was general septic peritonitis. The specimen which has been admirably mounted by Dr. Keith shows the relations of this sac exceedingly well. It is as large as a goose's egg, with an orifice formed of thickened indurated peritoneum. It has no relation to the small intestine or to the appendix which lies over it. The outer wall of the sac is rough and covered with cellular subperitoneal tissue from the iliac fossa. This other specimen has been very kindly mounted by Dr. Keith to show the fossæ which are so frequently found around the cæcum. There is a definite ileo-colic fold with a fossa behind it above the small intestine, between it and the colon. There is an equally plain ileo-cæcal fold with a fossa behind it below the small intestine, between it and the cæcum, and there is a third fossa which, like the one in the first specimen, has no relation to the small intestine and has the appendix above or in front of it, which lies behind the cæcum, between it and the iliac fossa—a post-cæcal or retro-cæcal pouch. From its anatomical relations there can be no question that it was an enormously exaggerated post-cæcal pouch which formed the sac of the hernia.

The formation of this pouch is no doubt due to the method of development of the cæcum and to the altered position which it assumes during fœtal life. At one time, when there is very little difference in calibre between small and large intestine and appendix, it lies outside the abdominal cavity altogether. Then it recedes, becomes fixed more or less against the posterior wall, and descends into the right iliac fossa. Occasionally the descent is carried so far that the appendix is found lying in the inguinal canal. As it descends it leaves more or less of a pouch behind it—the retro-cæcal pouch of the peritoneum. The strangulation no doubt was gradual; the orifice of the sac, though very firm, was of some size; and the portion of intestine which was strangulated was the ileum, which, there is some reason to believe, is not so highly sensitive a part as the thicker-walled and more active jejunum. But even when full allowance is made for this, the comparative mildness of the symptoms is a very striking feature in this case. The rapidity of the pulse and the persistence of the vomiting are of course significant, but it must be recollected that there was no vomiting for more than 24 hours after admission into the hospital, and on the fifth day, within a few hours of perforation, the patient felt sufficiently well to wish to go out. As in strangulated external hernia peritonitis did not set in until in all probability some of the extravasated contents of the intestine had begun to leak through the opening. Up to this the whole of the mischief was contained in a closed, practically extra-peritoneal sac and shut off from the general cavity.

CHRONIC MEDIASTINITIS (INDURATIVE MEDIASTINO-PERICARDITIS).

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THE acute form of the disease mediastinitis is very rare—in fact, it is stated by the late Dr. Wilson Fox in his "Treatise on Diseases of the Lungs and Pleuræ" (1891) that he had seen only one instance. Of the chronic variety, to which attention was first directed by Wiedenmann in 1856 and subsequently in 1873 by Kussmaul and called by him "callous mediastinal pericarditis" and by more modern writers "chronic mediastino-pericarditis," instances are occasionally met with, but judging from the small number of reported cases it is by no means a common affection. A remarkable instance of the disease which occurred in my practice at St. George's Hospital seems worthy of record and has suggested the propriety of a search for similar cases in our post-mortem and case books and elsewhere. With the view therefore of ascertaining the frequency with which chronic mediastino-pericarditis has occurred in the hospital an examination has been made of its records for the past 50 years, and the result of the investigation goes to show that the disease is of rare occurrence so far as this particular hospital is concerned. The fact of its rarity is further established by an elaborate and exhaustive paper by Dr. Thomas Harris in the *Medical Chronicle*,[1] in which after careful research only 25 cases (including three under his own observation) are collected and tabulated. In this article the scheme of tabulation adopted by Dr. Harris has been followed for the sake of uniformity and comparison.

CASE 1.—A woman, aged 25 years, was admitted into St. George's Hospital on May 12th, 1896. She lived at home with her parents. The family history was unusually good. The patient had had measles when a child; she had had no other illness of any kind and enjoyed good health until six weeks before she came under observation. She then began to feel weak without apparent reason but did not lie up. A fortnight before admission she noticed that her feet began to swell. This swelling gradually extended upwards to the abdomen; she experienced some aching in her legs, but was otherwise free from pain. At this time she suffered frequently from attacks of fainting. There were no other symptoms of disease. On admission the patient was found to be anæmic, with a "muddy" complexion, had dyspnœa on exertion, and some slight amount of cyanosis of her lips. There was general anasarca, the dropsy being especially marked over the front of the chest. On examining the chest percussion dulness was found over the base of the right lung as far as the inferior angle of the scapula, with diminished breath sounds, but there was in this situation no tubular breathing and no ægophony; over the right upper lobe both vocal resonance and vocal fremitus were increased; the right side of the chest was deficient in expansion. The impulse of the heart could not be felt and its boundaries, owing to the condition of the right side of the chest, could not be satisfactorily made out; the sounds were very feeble, but so far as could be ascertained the apex was pretty much in its normal position, if anything perhaps rather too much to the left. There was no murmur. The pulse at this time and throughout the patient's illness was very small but quite regular, and no abnormality in its rhythm was detected. Her pulse on admission was 82 and during her illness varied between that and 108. The urine was acid, of specific gravity 1022, deposited urates and containing a faint trace of albumin was free from sugar. Owing to the œdema of the abdominal walls no enlargement of any of the abdominal viscera was observed. The catamenia were regular as to time but the flow was scanty; the bowels acted regularly. The treatment consisted of light diet without alcohol. A five-grain pill of iodide of iron was given twice daily together with a mixture of solution of acetate of ammonia, spirit of nitrous ether, and decoction of broom. The temperature during the 11½ months when she was under observation was somewhat unsteady, varying from 97° to 100° F., but was for the most part normal. Little change took place during the first week of her residence in hospital save that the anasarca became less, that she complained of pain in the right lumbar region, and that the right side of the chest became completely dull, with loss of vocal fremitus, owing to the increase of serum in the pleural cavity. On May 20th the urine was free from albumin, there was less dulness over the upper part of the right chest, and ægophony was audible at the inferior angle of the scapula. A mixture of tincture of perchloride of iron, sulphate of quinine, solution of strychnia, and diluted hydrochloric acid was substituted for the former treatment. Between May 20th and May 26th the anasarca diminished to some extent and the ankles were on the latter date only slightly œdematous. The blood was examined with Fleschel's hæmoglobinometer and was found to contain but 30 per cent. of hæmoglobin. The urine was less loaded and remained free from albumin. On May 27th the note is: "There are some medium-sized râles at the base of the right chest as if from expanding lung; the œdema has almost disappeared." During the month of June there was slight improvement—i.e., the œdema subsided but did not disappear altogether. The fluid in the right chest was partially absorbed as was shown by the increase of respiratory sounds in the lung and the increase of vocal fremitus. At the end of this month, however, the notes state that although the physical signs of fluid were less marked in the right chest posteriorly, in front the right side was dull up to the level of the fourth rib, that the breathing was deficient, and that a few sharp, crackling râles were audible, while at the left base there were some dulness, deficient breathing, and ægophony. The hæmoglobin had now increased to 70 per cent., the proportion of white corpuscles being 2 to 813 red. The urine was scanty, occasionally only 16 ounces being the daily amount; it remained free from albumin but there was a copious precipitate of urates. Five ounces of port wine were added to the treatment by iron. With July came a recurrence of the anasarca and massage was ordered for 15 minutes daily and arsenic was added to the mixture. On July 11th the patient had a marked attack of Cheyne-Stokes breathing which ceased after an hour or two. The dulness in the right chest now extended to the spine of the scapula and on the left side to the inferior angle of the scapula; vocal fremitus was impaired but not altogether destroyed on either side; the patient was cyanosed and short of breath; the abdominal walls and back were œdematous, the legs also. Diuretics (acetate of potassium, spirit of nitrous ether, spirit of juniper, and decoction of broom) were substituted for the iron, arsenic, and nux vomica, and a calomel and colocynth purge was administered. The symptoms were but little relieved by this treatment. At this time a little albumin was again found in the urine. Only July 19th 29 ounces of serum were removed by aspiration from the right pleural cavity and next day the patient's condition was greatly improved—i.e., respiration on this side was much freer and the patient was more comfortable. Tubular breathing was audible on the right side but none was heard on the left. On Oct. 12th the iron, arsenic, and nux vomica were resumed. The condition of the chest remained much the same as it was on the day following the tapping. Now for the first time distinct enlargement of the liver was detected. The edge of the liver was felt about two fingers' breadth below the cartilages and there was tenderness on pressure over the organ. She again complained of pain in the right chest from the axilla downwards. On Oct. 19th the patient had a cough and the temperature rose to 100°. There was considerable dyspnœa. Two days later pleural friction was audible over the middle and lower parts of the right chest posteriorly and there was fluid in the peritoneal cavity. On the 28th ægophony was distinct at the inferior angle of the right scapula and respiration was very deficient; there was evidence of fluid also in the left pleural cavity. Two days later the patient was much better and in response to her urgent request she was allowed to lie outside her bed. In the early part of November the ascites increased, while the physical signs in the chest remained pretty much the same. The edge of the liver was felt two and a half inches below the cartilages. On Nov. 9th the legs were hard, livid, and very œdematous; there was great pain in the sacral region and owing to the increase in the ascites the liver could not be felt. On Nov. 26th there was less fluid in the peritoneum and the liver could again be felt two inches below the cartilages. The lips were blue, but there was much less œdema of the legs. On Dec. 3rd the ascites

[1] New series, 1895, vol. ii.

had increased so much that it was necessary to tap the abdomen; 10 pints of clear fluid having a specific gravity of 1020 were withdrawn, with the result that the pain in the outer part of the right chest returned with considerable severity. On the following day she was very faint. Ether and ammonia were ordered occasionally. The faintness continued and there was much dyspnœa for three or four days, while at the same time the fluid in the peritoneal cavity rapidly re-accumulated. The fluid in the pleural cavities remained much as before, but in spite of the large amount on the right side vocal fremitus was more marked on this side than on the other. The enlargement of the liver persisted. At the end of December there was again a large amount of fluid in the abdominal cavity and with its increase the pain in the right chest diminished. Three grains of compound digitalis pill were ordered to be taken night and morning. During the month of January, 1897, the patient steadily but slowly lost ground, although she did not keep her bed. The amount of fluid in the pleural cavities varied slightly without either increasing or decreasing to any marked extent. She gradually lost weight in spite of cod-liver oil and iodide of iron and port wine. In the middle of February she expressed a strong desire to go home for a while and as no change had taken place in her symptoms for some weeks her request was granted. On March 18th her condition was in every way worse; she was completely water-logged with urgent dyspnœa on very little exertion. She was therefore sent at once back into hospital and next day Dr. Fison, the house physician, tapped the abdomen. This gave her temporary relief, but the good effects soon passed off and on the evening of March 14th the temperature began to rise and reached 103°, on the 17th it was 104·5°, and on the morning of the 19th she died exhausted.

Necropsy.—The post-mortem examination was made on March 19th, 29 hours after death, by Dr. Cyril Ogle. The abdomen was distended; there was considerable œdema of the legs and other parts of the body except the face. The body was exsanguine. The left pleural sac was quite full of fluid; there were old adhesions posteriorly, especially at the upper lobe. The right sac contained about a pint of serum in the upper part, the lower being obliterated by old adhesions. The edges of the lungs were not adherent to the pericardium except over the right auricle and slightly so over the left ventricle. The right lung was rather the smaller of the two, was firm, œdematous, and "cardiac." There was a certain amount of crepitation throughout the right, but the left was airless owing to œdema and collapse. The pericardium was everywhere adherent and the heart was in consequence enclosed by a dense fibrous coat of about one-eighth of an inch in thickness, but over the lower part of the front of the heart it was a quarter of an inch thick. The heart was strongly adherent to the diaphragm by dense brawny fibrous tissue. In the anterior mediastinum around the vessels was an excess of fibrous tissue, but of such loose formation that there was no strangulation of the large vessels. The adhesion of the pericardium to the sternum was much firmer and more extensive than in health; it was impossible to separate the adherent structures without the knife. There was no unusual adhesion to the cartilage or ribs. Great increase of fibrous tissue was found in the posterior mediastinum, so that the œsophagus was firmly bound to the bronchial glands. The vena cava inferior was not obviously constricted. The muscular tissue of the ventricles of the heart was pale, soft, and not invaded by fibrous growth; the walls were thin; the wall of the right ventricle was a quarter of an inch thick and that of the left half an inch. The ventricular cavities were small; the largest cavity was the right auricle. The whole heart had the appearance of having been gradually compressed by its fibrous encasement and especially so from above downwards. The auriculo-ventricular orifices were of about normal dimensions; the valves were healthy and quite efficient, at all events there was only some trifling opacity of the mitral and aortic valves. There were no other cardiac lesions. The peritoneal cavity contained many pints of yellow serum; the parietal peritoneum was of a slate colour. There was a certain amount of "honeycombed" perihepatitis, but no thickening of the mesentery. Behind the peritoneum, in front of the vena cava and aorta, and thus involving the semilunar ganglia, was a considerable amount of firm fibrous tissue. The adrenal bodies were natural. The kidneys were smooth on the surface; the cortex was natural; they were not congested; the right weighed four and a half ounces and the left five ounces. The liver weighed two pounds and three ounces and was in a markedly "nutmeg" condition, fatty, soft, and flabby. The spleen weighed between four and five ounces, was firm, dark in colour, and "cardiac." The pancreas was large and pale. The stomach contained much mucus; its lining membrane was thickened, opaque, and red. The bladder was natural. There were some old-standing adhesions of the Fallopian tube to the right ovary; the uterus was natural. The joints were natural.

CASE 2.—A man, aged 31 years, was admitted into hospital on Oct. 28th, 1857. Of his family history the only record is that his father was at the time of the patient's admission in good health and that his mother died from phthisis. The patient himself had been accustomed to drink heavily but had enjoyed good health until six months (according to the medical registrar's notes) or sixteen months (according to those of the clinical clerk) previously to his admission. The attack for which he became an in-patient began with jaundice; this was followed by swelling of the legs and dark-coloured urine. When the man came under observation he was slightly jaundiced, with a brown tongue, some headache, and œdema of his legs. His pulse was 94 and full; his bowels were regular; and his appetite was good. His urine was highly coloured; its specific gravity was 1018 and albuminous, "with numerous casts." His heart-sounds were natural. The breathing was deficient at the back of the left lung where there was some dulness on percussion. Some crepitations were heard over the upper parts of both lungs and there was some mucous expectoration. The liver was enlarged; it extended three inches below the ribs. A mercurial purge and five grains of compound digitalis pill three times daily were ordered. The purgative acted freely. On Oct. 30th, there having been but little change meanwhile in the patient's condition, he had a paroxysm of dyspnœa in the night; "on the dispersion of the wind he was relieved." His legs were less swollen; crepitations were audible over both lungs and some dulness on percussion over the lower part of the left. The compound digitalis pill was ordered every six hours. On Nov. 3rd the urine was free from albumin and remained so for two days, when albumin was again passed. On Dec. 5th the compound digitalis pill was omitted and a mixture containing half a drachm of spirit of nitrous ether, half a drachm of tincture of squills, five grains of nitrate of potash, and one and a half ounces of decoction of taraxacum was substituted for it. Two days later free diuresis occurred and on Dec. 11th the œdema was less and the urine again was free from albumin. This was followed by improvement in the patient's condition, but on Dec. 16th he was not so well, his chief symptom being bronchitis. On Dec. 21st the note is: "There was no evidence of albumin with heat and nitric acid, but it was very alkaline," and there was a precipitate of triple phosphate. The specific gravity was then 1022. At the beginning of January, 1858, the jaundice still further increased and the patient became somewhat feverish. After this he became gradually weaker and on Jan. 7th he died. The diet consisted at first of milk and beef tea; afterwards meat and potatoes were added.

(For the above record of this case I am indebted to Dr. W. H. Dickinson who kindly allowed me access to Dr. Page's note-books in his possession.)

Necropsy.—The post-mortem examination was made 31 hours after death. The body was in good condition but intensely jaundiced. There was no anasarca. All the parts in the thorax were matted together, the pleuræ were universally adherent to the walls of the chest, and the parts in the mediastina were solidified by old cellular inflammation. The pericardium was immensely thickened so as to measure more than half an inch in thickness in some parts of its parietal layer. The visceral layer was also much thickened. The pericardium was adherent in most of its extent by old adhesions. The heart was healthy. The great veins were observed to be much loaded with blood. The lower part of the left lung was solidified so as to present the appearance of a greyish parenchyma firmly united to, and not easy to distinguish from, the greatly thickened pleura. The upper lobe of this lung was much congested but still pervious to air. The right lung was universally crepitant. The liver was much enlarged and gorged with blood. It weighed five pounds and half an ounce. The suprarenal capsules were remarkably pale in colour. The kidneys were very large; their united weight was 21

ounces. They were exceedingly congested and the cortical structure was universally increased.

CASE 3.—A man, aged 34 years, was admitted into St. George's Hospital on May 28th, 1892. He was a musician; he played the alto horn. He had suffered no illness until January, 1892, when he had influenza. For six weeks previously to his admission he had been short of breath both by day and by night. 12 days before admission swelling began in his legs and gradually spread upwards. On admission his breathing was very laboured; the length of the expiration was especially noticed. At the right base was some impairment of resonance, respiration, and fremitus. The heart sounds were very faint and the position of the apex could hardly be made out, but so far as could be ascertained it was normal. There was no valvular murmur; the pulse was soft and regular. There was much œdema of the legs. The urine contained a slight trace of albumin. The man never rallied but gradually failed in strength. Four days after admission the œdema was greater, the pulse intermitted, and many cardiac pulsations did not reach the wrist. On 10 days it was over 100 and on one occasion it was 143; his lungs became water-logged and the dyspnœa became orthopnœa. On June 5th the legs were tapped without much result. He had at this time a constant cough and was generally cyanosed. On June 27th paracentesis abdominis was performed and 11 pints of cloudy yellow fluid of specific gravity 1012 were withdrawn. Vomiting supervened and he died from exhaustion on June 29th.

Necropsy.—The post-mortem examination was made 13 hours after death. Externally the body measured 5 ft. 5½ in.; the feet were œdematous and the face was deeply congested. The costal cartilages were calcified. There was about a pint of blood-stained fluid in the right pleural cavity; on the left were some old adhesions and a little fluid. The lower lobe of the right lung was collapsed; in the branch of the pulmonary artery to the lower lobe was an ante-mortem clot. The left lung was normal. There were very firm adhesions all round the base of the heart above the pericardium. The pericardium was united to the left lung by old adhesions. The parietal layer was greatly thickened over the front of the apex of the heart by firm adhesions to the heart; elsewhere it was separated from the visceral layer by a blood-stained effusion of about half a pint. On the opposed surfaces there were firmly adherent tags of fibrin. There were also blood-stained pieces of exudation roughening the pericardial surface. There were firm pericardial adhesions around both auricles. The heart, together with the thickened pericardium, weighed 16 ounces. The heart was small and the visceral pericardium was much thickened and white as a whole, as if from chronic pericardial effusion. The valves and cavities were normal; the right and posterior cusps of the aortic valves were partially wasted. Otherwise this organ showed no pathological changes. Ascites was present, the peritoneum being much injected. The vermiform appendix lay in a subcæcal pouch to the right of the cæcum. The intestines were very deeply injected. The liver weighed 49 ounces and was nutmeg-like. The spleen weighed nine ounces, was firm and somewhat congested. The kidneys were both firm and congested. Their united weight was nine and a half ounces; on the right was an old and depressed scar. The microscope showed firm vascular fibrous tissue in the place of the adherent pericardium; there was a slight increase in the amount of fibrous tissue on the anterior part of the myocardium spreading in from the pericardium; the myocardium was otherwise natural.

CASE 4.—A man, aged 55 years, formerly a soldier, lately a policeman, was admitted into St. George's Hospital on Sept. 4th, 1895. The family history was good. The patient had never served abroad. Many years ago he had a soft chancre, but there was no evidence of his ever having had syphilis. He had always been a heavy drinker. Since 1888 he had suffered at times from bronchitis and from swelling of his legs since 1889; occasionally also from enlargement of his abdomen. Of late he had passed an excessive amount of urine. So far as he knew he had not had rheumatism. His skin had assumed a yellow tint for some considerable time; how long he did not know. For some time also he had experienced difficulty of breathing if he stooped and this was especially the case at those times when his abdomen was enlarged. There had been no dysphagia, hæmatemesis, or melæna, nor had he been troubled with pain in his chest. On admission he was slightly jaundiced. His abdomen was greatly distended by fluid and over the abdomen the superficial veins were dilated. There was excessive resonance over the front of the lungs and auscultation revealed rhonchi and râles. There was some bronchial expectoration. The first sound of the heart was abnormally loud and the organ was somewhat enlarged. Clinical examination showed no other departure from health. The liver was much enlarged and easily felt more than a hand's breadth below the costal cartilages. The legs were œdematous, but not greatly so. The urine had a specific gravity of 1022 and was highly coloured, but it was free from bile and albumin. On June 28th, 1895, five quarts of serum had been removed from the peritoneal cavity and on July 9th four and a half quarts. On July 15th there was evidence of some mediastinal condition causing obstruction to the return of blood by the vena cava superior and the superficial veins having become dilated carried the blood downwards to the district of the inferior vena cava. There was, moreover, well-marked dulness of the right clavicular and infra-clavicular regions and posteriorly there was considerable interscapular dulness extending to the right infra-spinous fossa. Over this area the breathing was tubular and the voice was stridulous. The respiratory sounds were diminished, especially at the right base posteriorly. After this date the patient spent the remainder of his time at the Morley Convalescent Hospital or in St. George's Hospital, gradually becoming weaker. His chief symptom was rapidly recurring ascites, for which the abdomen was tapped on many occasions—26 in all. When readmitted on Sept. 4th, 1895, he was suffering much from ascites and œdema of the legs and it was now discovered that his spleen was enlarged; there was a trace of albumin in his urine and he was distressed by dyspnœa. He was ordered saline baths in imitation of the so-called Nauheim treatment, but in spite of treatment he gradually became more and more water-logged and died on Oct. 26th, 1895. The temperature during the time when the patient was under observation was never above normal.

Necropsy.—The post-mortem examination was made 21 hours after death. Externally there was hard œdema of the legs and genitals and of the body generally, though to a less degree. There was jaundice of the upper half of the body, the colour being bright yellow. There were extremely dense adhesions in the left pleural cavity, especially at the lower part. So dense were these adhesions that the lung had to be cut away from the chest; the fibrous tissue forming the adhesions was half an inch in thickness in the vertebral groove. The pericardium was universally adherent to the heart and to the left lung, so that as these organs lay in the chest they appeared on removal of the sternum as a mass of fibrous tissue. Over the left ventricle this fibrous tissue in density greatly resembled cartilage and was about one-sixteenth of an inch in thickness, but towards the base of the heart it was much thicker and more dense and was continuous with a mass of fibrous tissue of almost cartilage-like density, which enveloped the arch of the aorta in front and on the right side. It extended as high as one and a half inches above the top of the arch and in front of the descending aorta. At that level it had attained a thickness of seven-eighths of an inch behind the sternum. The left innominate vein and the vena cava were not involved in this fibrous capsule. The ascending aorta was somewhat dilated and fusiform in shape, measuring four inches in circumference internally. There were only a few small patches of atheroma on the vessel. The valves were all healthy; the ventricles were rather dilated; the wall of the left was half an inch thick. The right auricle lay more towards the back than usual and was enclosed anteriorly and to the right by the dense fibrous tissue. Below the pericardium was attached by similarly dense fibrous tissue to the diaphragm. The vena cava inferior had a diameter of two and a half inches immediately below the diaphragm; below the liver it was no larger than natural. There was a large amount of fluid in the peritoneal cavity. The peritoneum was generally opaque and thickened. Where it was in contact with the abdominal wall there were many diffused areas of dark colour. The liver weighed four pounds eight ounces. There was excess of fibrous tissue uniformly throughout the organ; in the gall-bladder there were six calculi. The spleen weighed 17 ounces and was firmly adherent to the liver. With the exception of a few small cysts the kidneys were natural; the adrenal bodies were healthy. The joints examined were quite healthy.

(To be continued.)

BLACKWATER FEVER.[1]

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(*Concluded from p. 823.*)

HAVING enumerated the symptoms of blackwater fever I do not think I can do better than put before you a clinical picture describing a typical first attack as I have experienced it.

The patient, usually an adult male, is passed in England as being sound. He is sent out to Africa and possibly goes ashore for an hour or two at Sierra Leone; some fortnight later he arrives at his destination usually quite well but not infrequently feeling rather heavy and bilious on account of the discomfort of the voyage and the want of exercise on board ship; another cause of his malaise may be over-eating or taking too much alcohol. At first the climate—to the new-comer—feels exhilarating and the complete change of mode of life and surroundings is agreeable. Within a few weeks an attack of fever supervenes; the patient may have a rigor, then a hot stage and profuse sweating. Sometimes the first attack is so severe that the sufferer loses heart, becomes useless, and has to be invalided home. If not he soon feels better and gets about; probably leaves off his quinine and long before health is thoroughly re-established returns to duty which necessitates exposure to the sun and the night air. In a few weeks he becomes ill and is treated successfully only to fall ill again; perhaps he suffers from "bilious remittent fever," as it is called—i.e., he has a severe malarial attack with vomiting and some jaundice and the urine contains bile. After four or five attacks of fever, either ordinary or bilious, remittent in character, with perhaps several days when he has felt out of sorts and chilly but has not taken his temperature and has kept about his work, he becomes cachectic, irritable, and thin, his spleen is perhaps enlarged, he is constipated, and he often feels "liverish" and out of sorts. Later you get a message that he has blackwater fever. On arriving you find him lying in bed looking pinched, jaundiced, and ill; his tongue is broad, flabby, and furred and perhaps stained green from his vomit; he complains of headache, shortness of breath, nausea, and frequent vomiting, pains in his back and in his abdomen, especially about his liver and spleen; he is much alarmed at the colour of his urine which in bulk looks nearly black and which in a test tube is seen to be dark red in colour and when boiled is found to be loaded with albumin. He gives the following history. He felt unwell for a few days but did not take much notice of it and took little or no quinine. Two days ago he felt worse—had a rigor, perhaps—and went to bed recognising that he had a severe fever. Next day he was somewhat better but still feverish. That night there was a row in camp and he got up to see what it was and felt chilled and took some quinine which he promptly vomited. This morning he had a severe rigor, followed by a rise in temperature to about 104° F., and he noticed that he was jaundiced and that the next urine passed was deep red in colour or almost black, that his vomiting was severe, and that the vomited matter was of a decided green colour.

The patient is obviously ill and something must be done. He is possibly constipated and so an enema and cholagogue purge is given. Quinine is given very freely by the mouth, for the constant vomiting makes treatment very difficult, and even when the drugs are retained one feels doubtful whether the inflamed mucous membrane absorbs the whole of them. However, the treatment is persevered with, and with the aid of bicarbonate of soda and morphia eventually the vomiting is relieved and some food is kept down; the temperature drops to about normal within six hours of the blackwater symptoms; on the two following days it rises to about 102°; the urine, which never gets scanty, in the course of 24 or 36 hours clears, the jaundice which deepened at first rapidly disappears, and soon the patient gets better.

Now let me shortly describe a case ending fatally.

The patient had been up country for four days, but feeling very unwell he came down the river in an open canoe and was much exposed to the sun; he had a severe rigor followed by fever, jaundice, vomiting, and dark urine. When seen he is greenish-yellow in appearance, is dulled and apathetic, the urine is scanty and dark-red in colour and rather thick and it is passed with some difficulty. Frequent nausea is complained of, which is only relieved for a few moments by copious vomiting. There are pain and numbness in the calves and back and the abdomen is somewhat distended; pressure over the liver and spleen—which do not appear to be greatly enlarged—gives severe pain and causes fresh vomiting. There is considerable difficulty in breathing, the pulse is frequent and small, and there is intense thirst. The patient gradually gets worse and worse in spite of treatment, the urine becoming more and more scanty till at last only a few drops can be drawn off by the catheter; hiccough is severe and in about a week the patient dies in a comatose condition.

There are some further points connected with the clinical aspect of the question to which I would direct attention. Cases occurring before six months have been spent in Africa are very rare and first attacks are uncommon—though by no means unknown—after the third year spent in Africa. Bérenger-Féraud states that out of 100 cases of this disease in the hospitals of Senegambia the percentage of first-year cases was 5·4, of second-year cases 22·5, of third-year cases 42·5, there being after the third year a gradual decrease.[2] Hence it appears to be the rule that before an attack of hæmoglobinuria supervenes on an ordinary malarial attack the patient must have become more or less broken down or debilitated by previous fevers. Malarial patients who are also cachectic from other causes—e.g., dysentery—are also predisposed to the disease. I have not come across a single case in which people who have taken quinine regularly as a preventive of fever have been attacked with blackwater fever. As a rule it will be found that the patient neglected the early stages of his attack; and there is often some special aggravating cause also to be noted—e.g., exposure to the direct rays of the sun or to chilling breezes while suffering from slight fever; but this is not always present and occasionally a fever beginning like an ordinary one may develop blackwater symptoms without any apparent cause; in these patients there is usually marked cachexia previously.

In many of the most virulent cases the patients have resided on, or near, a plantation or have been employed upon works which have necessitated excavation of the soil. Plehn cites a fatal case—Case 7—in which the patient, a young missionary who had lived for two years in the Cameroons, latterly suffered from several slight attacks of fever but had never before had blackwater fever. During the last days before his attack he had been gardening a good deal; the onset of the attack the patient attributed to violent mental agitation caused by a dispute with another missionary.[3] (I would myself attribute the attack to the disturbance of the soil rather than to that of his mind.) A rigor usually precedes the onset of the blackwater symptoms; this is not, however, as is often stated, the true beginning of the disease; the patient has almost invariably more or less fever for at least a day or two previously. The hæmoglobinuria usually passes off gradually in two or three days and rarely returns during the attack. Occasionally, however, a succession of rigors occur and the urine is only hæmoglobinous for a short time after each rigor. Davidson gives an account of such a case.[4]

Cause of death.—There are two main causes of death: 1. Suppression of the urine from secondary nephritis set up by the passage of hæmoglobin through the kidneys. The urine is scanty and there is hæmaturia followed by suppression and uræmia; this has been put down to quinine poisoning, but the patients are often only first seen by the medical man when this condition is already established and not infrequently before they have taken any quinine. Frequently also they are able to retain very little quinine when it is administered. 2. Exhaustion. Anuria may be present, but it is due to the collapse. In these cases the urine becomes clear, but there is profuse perspiration, the pulse becomes feeble and the patient gradually sinks. The urine is scanty, as in all cases of collapse, and it may be almost suppressed, but it does not contain blood. In certain cases patients are stated to have died from shock due to the

[1] A paper read before the Epidemiological Society on March 17th, 1899.

[2] Bérenger-Féraud: De la Fièvre bilieuse mélanurique des Pays chauds comparée avec la Fièvre jaune; étude clinique faite au Sénégal, 1874, p. 109 (not p. 107, as stated in Plehn, Kamerun-Küste, p. 106).

[3] F. Plehn: Die Kamerun-Küste. Studien zur Klimatologie, Physiologie, und Pathologie in den Tropen, 1898, pp. 112, 113.

[4] Hygiene and Diseases of Warm Climates, p. 181.

enormous destruction of the red discs. The mortality in Nigeria due to blackwater fever appears to be about 20 per cent. of those attacked. That the death-rate is high is hardly surprising when we consider that in opening up a savage country like Nigeria many men are necessarily cut off for days or weeks from their medical officers and that proper hospitals and nursing are often absent. In addition to this the well-known prejudice against quinine and the folly and excesses of some men must be taken into account.

SUBSEQUENT ATTACKS.

Two kinds must be recognised:—1. True relapses. These may occur within about a week of the primary attack; it is well known that such relapses are liable to take place with ordinary African fevers if the patient has got about too soon and has been inadequately treated. The same thing may occur in blackwater fever. These should not, in my opinion, be called second attacks, as they occur before the patients are well—sometimes while they are still in bed; they are usually mild as to the amount of hæmoglobinuria, but, on account of the great prostration of the patients, are not without danger. 2. True second attacks or recurrences. A patient who has had blackwater fever is more liable to suffer from the disease than one who has not. This is especially true if he stays in tropical Africa after the attack, for he will probably remain in the cachectic condition which renders him liable to a recurrence; and even after restoration to health by a holiday in England, on his return to Africa if he gets into the old condition of cachexia he is very likely to suffer from a fresh attack. Moreover, second attacks or recurrences may occur without fresh infection in a manner precisely similar to ordinary malaria; thus such an attack may occur on the voyage home or in England. Second attacks are usually more fatal than primary and third attacks are worse still; but in rare cases after two or three attacks some kind of tolerance seems to be developed.

It will now be seen that the distinction which I intend to convey by using the words "relapse" and "recurrence" is important: a relapse is usually slighter and a recurrence more severe than the primary attack. Moreover, confusion between the two leads to fallacious statistics. Thus a man may say that he has had four attacks of blackwater fever, three of which occurred in two weeks and the other one and a half years later. This I regard as only two distinct attacks, two relapses having occurred in the first blackwater fever.

EXAMINATION OF THE BLOOD.

The difficulties of obtaining reliable information are very great. A medical man is at a great disadvantage; he is frequently worn out with nursing or sickness and has little energy left for scientific inquiry. Owing to the difficulties of porterage often he cannot carry a large microscope and outfit with him. As an instance of his difficulties I may mention that when the Brass men raided our port on the Niger in 1895 they annexed everything they could, and amongst other things our microscope, which is now, I understand, decorating a fetich temple; and no doubt my operating case—which was also carried off—has performed a not unimportant part in the sacrifices which were said to take place almost every day.

Since Manson's ingenious device of spreading large films with the aid of cigarette paper the examination of blood specimens has been rendered much more easy. The method has been elaborated by Pakes and Howard and I strongly advise anyone interested in this subject to read the plain and definite rules for spreading and fixing and staining blood films published by them in the *Journal of Tropical Diseases* for February, 1899. Even when the observer is competent and his methods are good, and though he feels certain that the patient is malarious, yet in the peripheral blood it may be almost impossible, without prolonged observation, to find a single parasite. Now it is well known that the parasites of the æstivo-autumnal group are only present in the peripheral circulation during their earlier unpigmented stage of development, and even then in comparatively small numbers, and that most of the reliable work on their morphology and development has been done in Italy, where opportunities of examining blood aspirated from the spleen, or fixed in sections of organs obtained from post-mortem examinations, are available. In Africa it is scarcely justifiable to aspirate the spleen for scientific purposes and the number of properly worked out post-mortem examinations are few. Still, in spite of these difficulties, parasites have been found in the peripheral blood in cases of blackwater fever and the more constantly the more competent the observer; they resemble the æstivo-autumnal group in that until now only young unpigmented forms have been found in the peripheral circulation. Whether identical with one of the three varieties already described as occurring in Italy or distinct from them remains to be worked out, and this can only be done by finding older forms in the blood of internal organs. F. Plehn who has done so much good work in this connexion has described an organism found in the blood apparently identical with that found in ordinary malaria in Africa; and recently A. Plehn[5] has recognised the identity of the parasites so described with the æstivo-autumnal parasite. Mannaberg, referring to blood examination in this disease, gives us the following warning: "Regarding blackwater fevers in which the search for parasites proves negative it is to be remarked that this proves little when the blood is not examined at the very beginning; less when the patient has already taken quinine."[6] Manson says: "Plasmodia have been found in the blood and organs; they are small and rarely sporulate in the peripheral blood, belonging doubtless to some form of the crescent-forming malignant type." In three slips which I recently took from a patient in England suffering from blackwater fever we found nine small circular unpigmented parasites with vesicular nucleus of about one-fourth the size of a red corpuscle. I think you will agree that, so far as microscopical examination of peripheral blood is concerned, they are indistinguishable from the unpigmented æstivo-autumnal parasites observed in Italy.

Pathology.—Having thus laid before you, to the best of my ability, the known facts relating to this disease I think that we are in a position to discuss the vexed question of its true nature and epidemiology. Four main views have, from time to time, been propounded. These views are as follows: 1. That the disease is nothing more or less than quinine poisoning. 2. That the disease is not malarial, but is a distinctive entity and one which is especially liable to attack those who are debilitated from malarial and other causes. 3. As far as I can follow Sambon, he appears to believe that the disease is the same as paroxysmal hæmoglobinuria.[7] 4. That the disease is a complication of malaria. This is the view which I have always advocated and one which, I venture to think, is held by nearly all those who have had extensive clinical experience of it; especially I would mention Easmon, the first British subject, I believe, who described the disease.

1. Koch's theory is that the disease is not a malarial one at all, but that it is directly due to the administration of quinine; but he further says that although no case came under his notice in which quinine poisoning could be discarded, yet that he would not go so far as to say that all cases are due to quinine poisoning.[8] In answer to this I can say confidently that I have seen cases of blackwater fever in which no quinine has been taken. Dr. Cargill has reported cases to me which bear out this statement. Recently in England I have seen a case of blackwater fever in which the patient had taken no quinine before the blackwater symptoms set in. This case is of considerable interest, for the patient, though he had many attacks of ordinary fever in Africa for which he had taken large doses of quinine, never had blackwater fever till he developed it some days after he had arrived in England, in bitter weather, debilitated with fever and dysentery, and when he did not take quinine. A further point of interest is that while taking quinine by the mouth he had a slight relapse; the acid hydrochlorate of quinine was then administered in large doses hypodermically and was continued for some days, and yet there was no further hæmoglobinuria, and the patient ultimately recovered from the subsequent anæmia as well as from his dysentery.

Again, Surgeon G. McGregor, writing to the *Guy's Hospital Gazette*, Jan. 21st, 1899, from H.M.S. *Mosquito*, Zambesi River, after stating that he has had experience of malaria in the West Indies, in West Africa, and on the Zambesi and Shire rivers, remarks: "Of the so-called blackwater fever which I regard as a pernicious form of malarial fever I have had three cases under my care, and in

[5] Beiträge zur Kenntniss von Verlauf und Behandlung der tropischen Malaria in Kamerun. Berlin: Hirschwald, 1896.
[6] Die Malaria-Krankheiten, 1899, p. 225.
[7] Brit. Med. Jour., Sept. 24th, 1898, p. 868.
[8] R. Koch: Das Schwarzwasserfieber. Arbeiten aus dem kaiserlichen Gesundheitsamte, 1898, xiv., 308.

all of them quinine was given in doses of from 45 to 60 grains in 24 hours throughout the illness and all recovered. And not only is quinine administered during an attack of fever, but the bluejackets here take five grains of quinine night and morning for several months at a time, and blackwater fever is rare amongst them, although they suffer from the ordinary remittent and intermittent types, but in a much less aggravated form than occurs amongst residents on shore." Later he strongly asserts that bad drinking-water and the absence of regular doses of quinine account for very severe types of fever which occur on shore. On the Niger all cases were treated with quinine and a large percentage of these recovered; surely these cases should have got worse under quinine treatment if Koch's statement is correct. I have personally had many attacks of the disease; in all I have taken quinine, and though in England I have taken large doses for severe fever yet I have not again developed any blackwater symptoms. My experience is that blackwater fever comes on chiefly in those who have neglected to take quinine. I have certainly had a case in which a man who had had one attack of the disease escaped any further attacks, apparently on account of the quinine which he took regularly.

Again, many cases have been reported in which patients have recovered from the disease when heroic doses of the drug have been given; I would refer specially to the cases reported by Dr. Moffat, principal medical officer, Uganda Protectorate; out of nine cases treated two died: in both of these he says that quinine was neglected till too late; all the other cases were treated with quinine, six of them with doses of from 60 to 120 grains in 24 hours.[9] Dr. Robson of Birmingham, who was in West Africa for two years, writes as follows:[10] "Again, in the most severe cases of blackwater fever I have seen patients get well who have been heroically dosed. I have myself on more than one occasion administered 60 grains (of quinine) as a single dose with advantage. ..... When the tropical physician has a better remedy supplied him no doubt he will relinquish his old favourite, but assuredly not till then." Battersby who suffered from more than one attack on the Niger regards this complaint as purely malarial. Eyles gives his opinion of the disease in the following words: "In short, this is the view I take of blackwater fever—that it is a malarial remittent fever to which is added another malarial manifestation, viz., hæmoglobinuria, and that when this occurs there is more marked hepatic disturbance than in ordinary remittents."[11] I have elsewhere referred to a case of hæmoglobinuric fever cited by Davidson in his book, "Hygiene and Diseases of Warm Climates" (p. 181), in which the disease was not cured till quinine had been given very freely.

I think that these quotations (and I could give many others) suffice to prove that in most cases blackwater fever is not quinine poisoning. Is it so in any cases? Cases have been recorded, chiefly in Italy and Greece, where in certain patients, owing to some inherent susceptibility, even minute doses of quinine were able to excite an attack of hæmoglobinuria, and whenever a subsequent dose was given, whether during an attack of malaria or not, another attack took place. It is said that sometimes this has been observed in several members of the same family. It is to be noted, however, that these results are very few in number and have only occurred where the patients lived in malarial districts and suffered from malarial cachexia and that some have previously had blackwater fever apart from quinine, and that the result is apparently independent of the amount of quinine given, a very small dose sufficing. Also, it is to be remembered that hæmoglobinuria is never a symptom of quinine poisoning in non-malarious subjects. These cases must be taken for what they are worth. It is possible that very occasionally quinine may cause hæmoglobinuria, but this is an idiosyncrasy and cannot be regarded as the cause of blackwater fever in Africa, for no one would be found to assert that the African cases infallibly relapse every time a small dose of quinine is administered, as is the case with these.

2. The second theory is that blackwater fever is a distinctive entity. This view was put forward by Manson in his able paper,[12] the main arguments being based on the distribution of the disease. Since then fresh facts have been brought to light, and in his recent work on tropical diseases, towards the end of his article on hæmoglobinuric fever, he speaks of it as being "the most important of the African forms of malarial poisoning." It has been pointed out that the distribution and relative prevalence of blackwater fever do not correspond with that of the æstivo-autumnal parasite and that in some regions where the latter was very prevalent blackwater fever was very rare or almost unknown. In answer to this I would urge two points: in the first place, since attention was drawn to the disease it has been described in regions where it was thought not to exist. Thus, Dr. Arthur Powell writing on hæmoglobinuric fever in Assam says: "The existence of this fever in India was denied some years ago, but whether justly so or not it is now either undoubtedly on the increase or perhaps more accurately diagnosed, where formerly it was confounded with bilious remittents." After noting that Crombie says that it is practically unknown in India he goes on to say: "I now record 11 cases which occurred in this district which were identical with the fever I have seen in those returned from the Gold Coast."[13]

Secondly, according to the Italian observers, æstivo-autumnal fever is by no means the entity which it is often assumed to be. No less than three distinct parasites are described—viz., malignant tertian, malignant pigmented quotidian, and malignant unpigmented quotidian. It is very possible that there may be one or more other varieties which occur in tropical Africa and which have a distribution similar to blackwater fever and with which blackwater fever is associated. Evidence in support of this is scanty, but it will be remembered that the three kinds of Italian malignant parasites have been only quite recently differentiated; indeed, the conclusions of Italian observers are still *sub judice* and the question can only be settled by careful examination of the blood in internal organs, where alone the latter development of the malignant parasite occurs.

3. Sambon's view that blackwater fever is paroxysmal hæmoglobinuria is sufficiently demolished by the fact that parasites are found in the blood in blackwater fever.

4. We now come to the fourth alternative—viz., that blackwater fever is not a distinctive disease but is a complication occurring in the course of malaria. I venture to think that there is a large amount of evidence in favour of this view. It is certainly the view held by most African practitioners; I will endeavour to prove that it is a reasonable and natural hypothesis. In the first place, I would assert that the one predisposing cause present in almost all cases is that the patients are previously suffering from a pronounced malarial cachexia; this was very clearly brought out in a series of cases recorded by Dr. Arthur Powell in Assam. It is further borne out by my own nine years' experience and by the statements of all the other West African medical men with whom I have been brought in contact; for instance, Mr. J. J. G. Whittindale, Dr. F. Cargill, and my successor, Mr. E. E. Craster.

I cannot agree with Dr. Sambon's statement, "We know of several cases now in which melanuric fever was contracted within a few weeks of landing and without any previous attack of malaria,"[14] and I would draw attention to the fact that this statement is apparently contradicted in another part of the paper, for I find it stated that "it is of the highest importance to note that blackwater fever is seldom a primary disease. Authors from all parts are unanimous in stating that the liability to infection is constantly associated with the occurrence of malaria."[15] Dr. Easmon says: "It [blackwater fever] only attacks those whose healths have for some reason or other become deteriorated." Further, he says: "It is often preceded by simple attacks of intermittent fever, with progressive anæmia and sallowness of the countenance."[16] Charts 6 to 9 in my book show that between Dec. 5th and Jan. 30th four malarial attacks—one of which was decidedly remittent in type—preceded an attack of blackwater fever which was intermittent in character. As further evidence I may mention one case which came under my notice of a new-comer who developed blackwater fever within a few months of his landing in West Africa, but in this case it was found that the patient had previously suffered from severe malaria in Burmah. This condition of cachexia may be brought about either by several

[9] Brit. Med. Jour., Sept. 24th, 1898, p. 926.
[10] Ibid., Oct. 22nd, 1898, p. 1287.
[11] Malarial Fever as met with on the Gold Coast, p. 11.
[12] Transactions of the Epidemiological Society, 1892-93, xii., p. 111.
[13] The Journal of Tropical Medicine, December, 1898, p. 117.
[14] Brit. Med. Jour., Sept. 24th, 1898, p. 868.
[15] Ibid., p. 867.
[16] Dr. J. Farrell Easmon: The Nature and Treatment of Blackwater Fever, 1884, p. 2.

definite attacks of severe malaria or perhaps by frequent slight attacks which are at times not even severe enough to keep the patient in bed and which are therefore neglected. In the latter case, though the patient feels a little out of sorts and chilly, he usually disregards it and does not take his temperature, or he may take it and find it to be 100° F., swallow some antipyrin or quinine and go to bed, and then get up the next day feeling rather better and go about his work. I take it that though such a patient would tell you that he had been in good health and had had no fever, yet malarial parasites had been present in his blood the whole time, and that though his power of resistance was just sufficient to keep them from multiplying to any great extent, still all this time they were manufacturing toxins and thus contributing to that toxæmia to which malarial cachexia is due. Such persons as these are the subjects who are most liable to suffer from blackwater fever, and I will go further and say that I am certain that when it arises in such cachectics its occurrence is due either to excessive exposure, privation, great fatigue, to some special malignancy of the parasite, or to some indiscretion committed by the patient during an attack of ordinary malaria which might otherwise have passed off without this complication.

Cause of hæmoglobinuria.—Before discussing the cause of the hæmoglobinuria in blackwater fever we must look at the process by which destruction of hæmoglobin in malaria ordinarily takes place. In benign tertian and quartan fevers the parasite destroys the hæmoglobin and turns it into another pigment and when it sporulates this pigment is set free and carried to liver, spleen, and brain, causing the well-known malarial pigmentation. In the æstivo-autumnal fevers the same thing occurs, but the parasites cause the rupture of the corpuscles before the hæmoglobin is completely destroyed, thus causing hæmoglobinæmia. In ordinary fevers this free hæmoglobin is taken up by the liver and changed into bile pigment, but none appears in the urine. In severe æstivo-autumnal fevers one-third of the total number of corpuscles may be destroyed in one paroxysm and yet no hæmoglobinuria occur, the result of the excessive bile formation being bilious remittent fever.

For hæmoglobinuria to occur there must be a large number of corpuscles destroyed and a large quantity of hæmoglobin set free in the blood; this is proved by the experimental hæmoglobinuria induced by certain poisons. Hence, in order to explain the occurrence of hæmoglobinuria in malaria we are compelled to assume that there is a sudden destruction of corpuscles, thus setting free the whole of their hæmoglobin. Evidence in favour of this is to be found in some of the descriptions of the result of examination of fresh blood films during an attack of hæmoglobinuria. Thus Manson speaks of the apparent ruin and wholesale solution of the red discs. What change can it be that brings about this destruction? A. Plehn suggested that it was some alteration in the specific gravity of the blood causing solution of the red discs. I would rather suggest that it was due to the accumulation of malarial toxins. As above stated, the patients are cachectic—i.e., they are suffering from chronic toxæmia. Supposing anything—e.g., chill—should check the excretion of toxins, they might accumulate until they were able to effect the direct destruction of the red discs. On this theory blackwater fever is to be regarded as a special complication of malaria. The hæmoglobinuric complication I regard as wholly analogous to chlorate of potash poisoning and paroxysmal hæmoglobinuria. In blackwater fever the cause is probably the malarial toxin; in chlorate of potash poisoning it is sufficiently obvious; in paroxysmal hæmoglobinuria it is unknown, though it possibly is syphilitic in origin, as suggested by Copeman,[17] who says: "A definite specific history has been forthcoming in all the cases that have come under my own observation." The three cases are, however, only analogous. I do not for one moment suggest the identity of the causes of blackwater fever and paroxysmal hæmoglobinuria any more than I should of blackwater fever and chlorate of potash poisoning. The hæmoglobinuria is simply the natural result of the preceding hæmoglobinæmia.

One other fact certainly is of importance in blackwater fever, as in all other poisoning cases, and that is idiosyncrasy. I believe that some persons get hæmoglobinuria with a much lower degree of malarial toxæmia than others. Some of these patients may account for the slight and frequently recurrent cases which are reported. Another factor may come in, and that is degenerative changes in the liver the result of malarial poisoning which impair its bile-forming functions. It is clear that if the liver were to strike work the hæmoglobin would not be changed into bile pigment and that a hæmoglobinæmia, however slight, would cause hæmoglobinuria. That such, however, is not the main cause is, I think, shown by the fact that there is much bile formed during blackwater fever, as shown by the profuse bilious vomiting and the not infrequent bilious diarrhœa. While not wishing to claim that the above is any more than a possible theory as to the cause of blackwater fever, yet I would submit that it is possible, and, further, that it helps to emphasise what I believe to be undoubted facts—viz., that blackwater fever is of malarial origin and, further, that it is a special complication occurring in malarial cachectics and dependent on the destruction, by some means other than direct parasitic invasion, of the red discs and the solution of the contained hæmoglobin in the plasma.

[17] Allbutt's System of Medicine, vol. v., p. 627.

TREATMENT.

Having thus discussed the pathology of blackwater fever and shown what I hold to be its connexion with malaria I come to the practical question of its treatment. In dealing with this it will be well to remind ourselves that three distinct factors are present. There is, in the first place, the attack of malaria during which the hæmoglobinuric paroxysm develops. Secondly, there is the chronic malarial toxæmia which has predisposed the patient to the attack. Thirdly, there is the sudden loss of hæmoglobin which in its effect in no way differs from an ordinary severe hæmorrhage. The above are present in all cases; sometimes there is another factor present in the subsequent nephritis. It is clear that only the first of these—namely, the malaria—would yield to quinine. So far as is at present known, quinine has only a parasiticide and not an antitoxic function in malaria, and hence it cannot be relied upon for treatment of toxæmia and obviously not for the hæmorrhage. Quinine, therefore, should be given in blackwater fever, but with the express object of clearing the blood of the malarial parasites and hence it should be given in full doses similar to those given in ordinary attacks of tropical malaria. It must, however, be clearly understood that by the time a patient has reached the point of hæmoglobinuria his tissues are probably much degenerated and his vital functions seriously lowered; hence, though we may cure his malaria by quinine we must not be surprised should he succumb.

A cachectic patient may be unable to withstand a severe hæmorrhage; when to this is added the constant and distressing vomiting which often involves starvation he is clearly liable to die from exhaustion, as many of the patients certainly do. On the other hand, this is a very different thing from saying that quinine is of no use in blackwater fever. I hold that it should be always administered in doses sufficient to make it certain that the blood is freed from parasites, just as the first step in the treatment of a patient suffering from sapræmia due to retained placenta is to clear out the uterus and so remove any danger of further infection.

As previously mentioned in this paper, it is frequently difficult to efficiently administer quinine by the mouth on account of the persistent vomiting, and administration by the rectum is unsatisfactory. I am myself a strong advocate for the hypodermic administration of quinine under these circumstances and in this practice I am supported by the profession in Italy and in America—though, as far as I know, many English medical men hesitate to adopt it. The advantage of the hypodermic method is sufficiently obvious, for one can rest assured that the dose which we administer is actually absorbed. The supposed difficulties are really hardly worth our consideration if we are thoroughly aseptic. Sulphate of quinine is not suitable for hypodermic injection; perhaps the best salt is the acid hydrochlorate which is chiefly used in Italy: it is soluble in its own weight of water. The acid hydrobromate which is soluble 1 in 6 of water may also be used, especially if the patient is liable to cinchonism. Personally, when in Africa I used the lactate which is soluble (according to Squire, seventeenth edition, 1899) 1 in 6 of water. I am inclined to think that 10 grains of quinine administered hypodermically every eight hours on the first and second day of the disease and every 12 hours on the third day would be a sufficient dose; after this, I suggest that five grains should be given twice a day till the end of the attack. I may

mention that I always boil the solution of quinine and inject it while it is still quite warm. When the drug cannot be administered hypodermically larger amounts may be necessary. In a case of blackwater fever which I recently saw in England quinine was at first given by the mouth; the patient had a relapse. It was then given hypodermically and the patient recovered without any further relapse.[18] It is of course to be remembered that quinine will accumulate if the urine is either greatly reduced or suppressed and therefore it must not be continued in the same doses should this contingency occur.

So much for the treatment of the malarial element; as regards the other two factors the main indications are to maintain free excretion with the view to liberating the body from the accumulated toxins and to procure rest and nutrition which will enable recovery to take place from the anæmia. If the bowels are not opened a cholagogue purgative and enema should be given; but over-purgation should be avoided. I always myself administer sodium bicarbonate freely; this helps to allay vomiting and gastric pain and makes the patient more comfortable, and, I think, does good by its diuretic action and also helps to diminish the acidity of the urine. Opium should be given without hesitation to procure rest. Nutrition must be maintained by rectal feeding if necessary. Strychnine and digitalis may be necessary in cases of extreme asthenia; they will act beneficially by helping to maintain the renal blood-pressure and therefore the secretion of urine, for doubtless some of the cases of anuria occurring in blackwater fever are the result of collapse and not of nephritis. If nephritis occurs the usual remedies are to be adopted, but caution should be used in the administration of such depressing drugs as pilocarpine, from the use of which I have certainly seen disastrous results; if it is decided to administer this drug not more than one-sixth of a grain should be given at one time. After recovery the patient ought to be advised to take a holiday, if possible in England, and should not return at any rate until he has completely recovered from his anæmia and cachexia. Indeed, on general principles it is probably desirable that no one should return to Africa after an attack. This is particularly the case where the blackwater fever has developed in spite of precautions, but applies less to those cases where the attack can be traced to exceptional hardship and privations which are not likely to be repeated. Those who, from one cause or another, cannot stand quinine and those who suffer from even slight albuminuria should not be selected for malarious climates. Finally, I urge that the prophylaxis of blackwater fever by habitual use of quinine will be found to be more hopeful than its treatment. I have come to the definite conclusion that besides adopting precautions in regard to exposure to chills, wet, and to the sun, and as to moderation in food, alcohol, and sexual matters, every resident in the more malarious parts of Africa should take at least five grains of quinine each day. In the large majority of cases I believe that this would prevent the chronic malarial poisoning which is the predisposing cause of blackwater fever and would do much to eliminate this scourge from our colonies.

Dover-street, Piccadilly, W.

[18] A. T. Wooldridge: A Case of Blackwater Fever complicated by Dysentery, THE LANCET, March 18th, 1899, p. 762.

ROYAL NATIONAL PENSION FUND FOR NURSES.

The annual meeting of this society was held on March 24th at 28, Finsbury-pavement. The deputy chairman, Sir Henry Burdett, K.C.B., presided, and in moving the adoption of the report reviewed the work of the past year which, he said, had been uneventful except for the steady increase in the number of new members. The total invested funds had risen from £372,000 to £435,500, a net increase of over £63,000 exclusive of cash balances, while the value of the securities held by the fund at the end of the year was considerably over the cost at which they stood on the books. He concluded by stating that H.R.H. the Princess of Wales, the President of the society, had expressed her wish to present certificates to those nurses who had entered the fund since the last presentation at Marlborough House. The date could not yet be fixed, but the policy-holders would be communicated with as soon as anything definite was known.

A CASE OF CEREBRO-SPINAL MENINGITIS TREATED BY LAMINECTOMY AND INCISION OF THE DURA MATER IN THE DORSAL REGION; DRAINAGE; RECOVERY; REMARKS.

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A MAN, aged 24 years, was taken ill on Jan. 4th, 1899, with pain in the legs which prevented his sleeping that night. On the following day the pains were diffused all over the body and he experienced a dull, singing sensation in his ears which persisted till he became deaf. He was admitted into St. George's Hospital on Jan. 6th and was then in a curious mental condition; his attention wandered and he was unable to reply pertinently to questions. This was no doubt partly explained by his deafness. The knee-jerks were normal. There was no muscular tenderness on pressure. There was pain in the muscles of the back and legs but no other objective signs of disease. He vomited twice in the evening and was delirious at night. On Jan. 7th the patient lay on his right side with his thighs and knees flexed; when disturbed he returned to this position. There was retraction of the head and rigidity of the muscles of the neck but no tenderness of the spine. There was headache, but this was not localised and there was no tenderness on pressure. He was drowsy during the early part of the day, but later in the afternoon he became restless and tried to get out of bed; at night he was delirious and a male attendant was required to control him. He vomited twice in the evening. The probability of his having cerebro-spinal meningitis was recognised and he was therefore examined with a view to determining whether any cause could be found. There were no discharges from the ears or nose, no suppuration around the teeth or tonsils, no urethral discharge, and no history of any recent illness. The lungs and heart were normal. No enlargement of the spleen could be made out. There was no herpes or petechial eruption. The tache cérébrale was present. Convergent strabismus occurred occasionally, but not constantly; the pupils varied, being sometimes contracted and unequal and at other times dilated. There was horizontal nystagmus. Mr. Grimsdale kindly examined the fundi oculorum and found that they were normal and on several subsequent occasions during the patient's illness he reported that there was no sign of optic neuritis. On the 8th the patient's condition was worse, the rigidity spread to the muscles of the back, he screamed out, and his temperature, which had previously been normal, began to rise. No knee-jerks could be elicited. Red patches appeared on the skin on the inner aspects of both knees and ankles and on the right elbow and were probably in part due to pressure and in part due to trophic changes. The skin of the hands and feet was red and swollen, but not œdematous. The headache and pain in the back and legs were worse and there was some giddiness. There was divergent strabismus but no facial paralysis or paresis. It is probable that the abnormal ocular movements were the result of spasm and not due to paresis. He was delirious and violent again during the night. On the 9th he was drowsy after a bad night. The pupils did not react well to light. The pulse had quickened to 124. The bowels had been constipated since his admission and only open after purgatives. The urine had to be drawn off in the evening; there was never any incontinence of urine or fæces. On the 10th he was alternately comatose and actively delirious. His neck was more rigid and his general condition was worse. He was regarded as having cerebro-spinal meningitis. His hands were still red and somewhat swollen but not tender. The skin had now become eroded on his right elbow and reddened on the left and a papular rash

developed on the forehead, the inner side of the knees, and on the thighs. There were no petechiæ on the skin. So far the treatment had consisted in giving iodide of potassium, which possibly caused the rash, and in sedatives such as chloral and morphia, but as his condition was getting progressively worse and it seemed probable that he would die if left alone it was decided to ask for surgical assistance with the view of opening the dura mater of the lower part of the spinal cord and by establishing drainage to relieve the symptoms due to pressure. Mr. Allingham saw him in consultation and agreed to operate.

An incision six inches long was made over the lower dorsal spines and laminectomy of the seventh and eighth dorsal vertebræ was performed. When exposed the dura mater was seen to bulge. It was incised for about an inch in the long axis of the cord. Coagulated lymph and cerebro-spinal fluid to the amount of about three ounces came out. Some of the fluid, soaked up in cotton wool, and the lymph were examined by Dr. Slater, bacteriologist to the hospital, but no diplococci were found. A drainage-tube was inserted and no attempt was made to unite the incised margins of the dura mater. The skin was loosely approximated by nine sutures and the usual antiseptic dressings were applied. On Jan. 11th the patient was decidedly better. His neck was less rigid; the knee-jerk was obtained on the left side but was absent on the right. The hands were less flushed than before. There was a free discharge of clear fluid from the wound necessitating its being dressed twice in the day.

For the following three and a half weeks the discharge from the wound continued, but at intervals of two or three days the discharge became impeded by the healing of the wound and as a result of this obstruction the patient became ill, his temperature going up (*vide* chart) to 102° or 103° F., his head ached, and the muscles of the neck (which were at other times normal) became rigid. All these symptoms disappeared when the wound was dressed and a free escape of fluid resulted. These symptoms therefore appeared to be due to increased pressure exerted by the cerebro-spinal fluid on the brain and upper part of the cord. The headache was partially relieved by antipyrin and phenacetin combined. The liquid extract of ergot and tincture of belladonna were given with a view of diminishing the abnormal secretion of cerebro-spinal fluid, but this latter form of treatment seemed to be ineffectual. As soon as it seemed safe he was propped up in bed so as to increase the drainage; a little later he was put into a chair in the afternoon but still the temperature rose, at intervals, in the later part of the day and the other symptoms presumably due to pressure of cerebro-spinal fluid recurred. He was then got out of bed in the morning as well, and after this (the thirty-fourth day of the illness) his temperature remained normal, though the discharge diminished and finally disappeared. On Feb. 19th the tube was removed and the wound was completely healed on March 2nd. During this period of interrupted convalescence he gradually improved. Both the knee-jerks were present on Feb. 4th and no signs of any spastic condition developed. His hearing slowly improved slightly but he is still very decidedly deaf. Mr. Bull kindly reported on the ears to the effect that there was no disease of the conducting apparatus of the ears. Presumably it was due to inflammation spreading from the meninges along the auditory nerves towards the internal ear. At no time was there any affection of his joints such as has sometimes been recorded in epidemic cerebro-spinal meningitis. Thus in 111 cases elaborately reported on in Boston by Dr. Councilman, Dr. Mallory, and Dr. Wright it occurred in six. The patient can walk, but is naturally very weak and is in addition anæmic.

Remarks.—The lymph removed at the operation confirmed the diagnosis of cerebro-spinal meningitis and as no definite cause such as otitis, infective disease elsewhere, pneumonia, erysipelas, or infective endocarditis is forthcoming it appears probable from the symptoms, and perhaps especially from the deafness, that this was a sporadic case of epidemic cerebro-spinal meningitis. The absolute proof of this is, however, wanting, since the diplococcus intracellularis was not found in the lymph removed at the operation. The fluid should for purposes of bacteriological diagnosis have been removed by means of the needle of a hypodermic syringe before the dura mater was incised. But apart from the fact that the material provided for bacteriological examination was not satisfactory it may be mentioned that the experience gained in the epidemic at Boston, U.S.A., shows that the diplococcus intracellularis may be infrequent in the fluid and difficult to cultivate.[1]

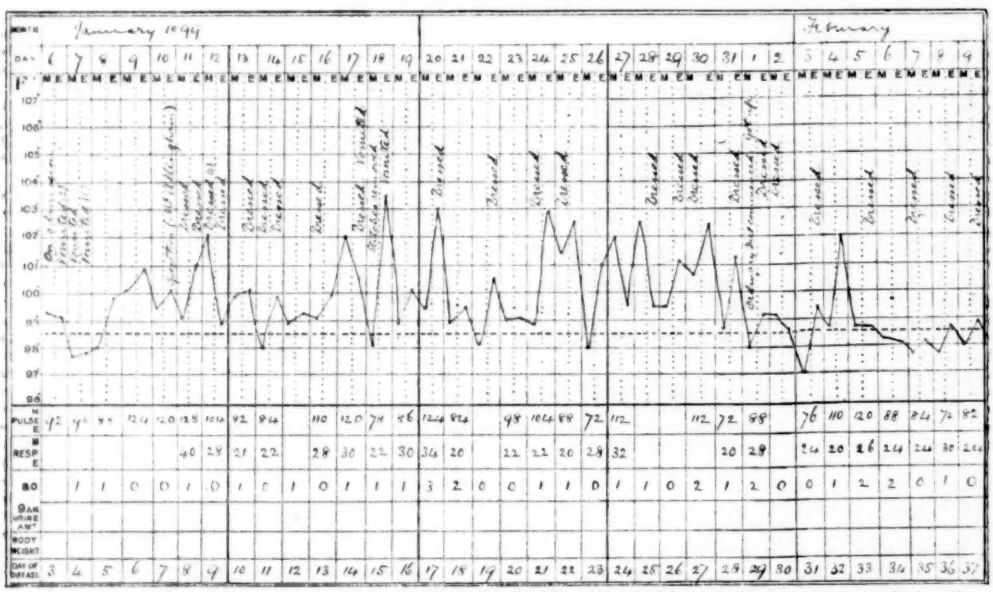

Chart showing the course of the temperature from Jan. 6th to Feb. 9th, 1899. After the later date the temperature remained on the normal line save a slight disturbance about the date of the removal of the tube—i.e., Feb. 19th.

With regard to the symptoms we do not propose to consider them seriatim, but there are one or two to which attention may be directed. There was no herpes, but there was an eruption of a papular nature which was probably due to iodide of potassium, since there was no petechial character about it such as characterises the eruption of epidemic

[1] Report on Epidemic Cerebro-spinal Meningitis from the Boston City Hospital Pathological Laboratory, 1898, p. 79.

cerebro-spinal meningitis. The hands became red and swollen and suggested a condition like erythromelalgia, which has also been observed in some spinal diseases, but there was no manifest tenderness on pressure. That the trophic and vaso-motor influences were at any rate considerably impaired is shown by the readiness with which the exposed skin of the hands became red from vaso-motor paralysis, and by the facts that pressure led to similar changes on the knees and ankles and friction to destruction of the skin over the right elbow. Optic neuritis was absent. Inasmuch as the auditory nerves are very frequently affected it might have been expected that optic neuritis would be frequent; this, however, appears hardly to be the case, for Randolph[2] only found it in six out of 40 cases. It is interesting to note that in the somewhat similar though chronic affection, the non-tuberculous posterior meningitis of infants, optic neuritis is, according to Dr. Lees, very rare.[3]

The chief interest attaches to the treatment. As has been seen no good resulted from iodide of potassium and the man appeared to be likely to die. As a last chance it was thought justifiable to open the dura mater of the cord and drain the subdural space. The question now arises as to whether this was, after all, absolutely necessary, for the case was not one of the fulminating class in which death occurs within 48 hours of the onset, but corresponds to Osler's[4] ordinary type. There is, however, no doubt that the patient did improve considerably after the operation and it does not as yet appear that he has suffered in any way from the operation.

As far as we can find out the spinal dura mater has not been freely opened before in acute cerebro-spinal meningitis. This procedure is however only carrying further what has already been done—viz., lumbar puncture—while in cases of chronic non-tuberculous posterior meningitis in infants Mr. Ballance[5] has trephined the occipital bone and drained the posterior sub-arachnoid cistern. This method of treatment has therefore been already applied to the posterior fossa of the skull in a disease which is very closely allied indeed to epidemic cerebro-spinal meningitis, for Still[6] comes to the conclusion that the micro-organism of simple posterior basic meningitis of infants is almost identical with the diplococcus intracellularis of epidemic cerebro-spinal meningitis.

Lumbar puncture has often been employed for purposes of diagnosis. Thus in the 111 cases of the Boston epidemic it was employed 55 times and no bad results were ever seen; indeed, in one case the patient seemed to be relieved by it and to be quieter and to sleep better.[7] In a valuable digest on "Lumbar Puncture of the Spinal Meninges as a Diagnostic and Therapeutic Measure" Mr. Alexander Miles quotes a case of epidemic cerebro-spinal meningitis in which von Leyden[8] performed lumbar puncture three times; the first time the fluid contained diplococci, a few days later the fluid withdrawn contained fewer, and on the third occasion none. The patient recovered. The evidence derived from Lenhartz's[9] experience is conflicting; in two patients no fluid was obtained by lumbar puncture and recovery followed, while three others where fluid containing diplococci was withdrawn proved fatal. In our case laminectomy was performed in the dorsal region rather than in the lumbar inasmuch as the operation is easier from the facts that the laminæ are narrower and more easily divided and the muscles are not so thick as in the lumbar region.

As compared with lumbar puncture laminectomy and incising the spinal dura mater is of course a rather more formidable proceeding, but, on the other hand, it gives exit to a much larger quantity of fluid and is a more radical method of treatment inasmuch as it establishes a satisfactory drainage, and it may be added that in an experience of some twelve laminectomies the surgical writer of this paper has never observed any untoward results.

The operation itself was successful, but the discharge in our case of cerebro-spinal fluid once established it seemed doubtful whether the wound could ever be closed with safety. For when the outlet became temporarily occluded the patient suffered from headache, fever, and cervical opisthotonos. These symptoms certainly resemble the intermittent type of epidemic cerebro-spinal meningitis; if they were the manifestations of that condition the satisfactory result of the case could be explained by regarding this as the natural termination of this form of the disease. On the other hand, they seemed to depend so closely on an intermission of the discharge of cerebro-spinal fluid and to be so entirely relieved when the flow was established that it is difficult to disassociate them. Assuming that the symptoms were due to the pressure of pent-up cerebro-spinal fluid it appeared that though the patient might remain fairly comfortable as long as the drainage was kept up there was yet some risk that if he was left with a permanent fistula secondary infection of the spinal membrane might occur and lead to very grave results. It seemed as if the cerebro-spinal fluid was secreted in larger quantities and that the choroid plexuses having once started on this abnormal functional activity might continue to do so. Dr. StClair Thomson's[10] valuable researches, though then unpublished, on a continuous discharge of cerebro-spinal fluid from the nose were, it should be stated, fully known to us and led us to fear that a similar state of things might develop in our patient. While if the exit of fluid was interfered with mechanically there were two alternatives: (1) that the secreting choroid plexuses might feel the effect of increased pressure and return to their ordinary state of function, and that thus after a short time the intracranial and intraspinal pressure might become normal; or (2) that as in some cases of spina bifida which have been radically cured by operation hydrocephalus might result. Hydrocephalus is also known to be a sequel of epidemic cerebro-spinal meningitis. We hope that the first alternative has taken place.

Occasionally after recovery from epidemic cerebro-spinal meningitis a spastic condition of the legs develops; there is no sign of this in our patient and further there is no evidence of any harm having resulted from the opening of the spinal meninges. There is nothing to suggest any local pachymeningitis or cicatricial contraction of the meninges around the cord, or that any transverse meningo-myelitis is in progress.

In conclusion, the chief points of interest are: (1) the good effects of free drainage in relieving increased tension in the subdural space in cerebro-spinal meningitis; and (2) that while this is more perfectly effected by laminectomy and incising the dura mater than by the slighter operation of repeated lumbar puncture, there appears to be some danger lest this free drainage may establish an excessive secretion of cerebro-spinal fluid analogous to that which Dr. StClair Thomson has shown to occur when the cerebro-spinal fluid leaks through the floor of the anterior fossa into the nose.

We are indebted to Dr. J. Howell Evans, house physician, and Mr. A. T. Spanton, clinical clerk, for their careful notes.

[2] Quoted by Ormerod, Allbutt's System of Medicine, vol. i., p. 666.
[3] Lees: Brit. Med. Jour., vol. i., 1897, p. 1092.
[4] Osler: Principles and Practice of Medicine, third edition, p. 107.
[5] Ballance: Brit. Med. Jour., vol. i., 1897, p. 1092.
[6] Still: Transactions of the Pathological Society, vol. xlix., 1898, p. 327.
[7] Loc. cit., p. 81.
[8] Leyden: La Semaine Médicale, July, 1896.
[9] Lenhartz: La Semaine Médicale, April, 1896; quoted by Miles, the Scottish Medical and Surgical Journal, vol. i., 1897, p. 158.
[10] Proceedings of the Royal Society, February, 1898.

THE COMPLICATIONS OF THE SERUM TREATMENT OF DIPHTHERIA.

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THE value of the serum treatment of diphtheria being now thoroughly established, its complications which are fairly constant become somewhat important. During the past few months I have collected at the Homerton Fever Hospital 100 cases which I have personally examined each day and on these cases my paper is based. These complications are the following: rashes; pains in and around the joints; fever; transient albuminuria; abscess, bruising, and sloughing at the seat of injection; and certain constitutional disturbances.

Broncho-pneumonia, nephritis, and other inflammations, and also sudden death following the injection of antitoxin serum, have been recorded, but nothing of this kind has occurred in the London hospitals where several thousand injections are given annually. The blood-serum is responsible for causing the rashes, the pains, and the fever, as these occur whether the horse from which the serum is taken be immunised or not. Different horses produce

different effects with regard to the prevalence of pains and the proportion of the varieties of rash, and hence the percentage of these varies constantly. The effect of dose on the frequency of the rashes is very little if anything. I have calculated out the average dose of all the patients treated at the Homerton Fever Hospital from January to June, 1898, neglecting those who died before the rash had time to appear, and find that of those who developed a rash it was 6223·5 units and of those who had no rash it was 5332·1 units. During the same period 166 patients had multiple injections and of these 90 had a rash and 76 had no rash, and 351 patients had each one injection and only 156 had a rash and 195 had no rash. Hence it is probable that large and also multiple doses increase the frequency of the rashes to a slight extent. Adults are more liable to severe pains than children. The severity of the attack of diphtheria and the day of the disease on which the antitoxin is administered have no influence on the frequency of rashes and pains. For the year 1898 the percentages at the Homerton Fever Hospital were: rashes, 43·2 per cent.; pains, 7·4 per cent.; fever alone, 3·6 per cent.; and abscess, 1·3 per cent.

RASHES.

There are two varieties of rashes, urticarial and erythematous, and these may occur alone or be combined in endless variety. Of the 100 cases 25 were urticarial, 31 were erythematous, and 44 were combined; and of the latter 26 were mixed and 18 were successive, the rashes following one another immediately or after an interval of from one to five days, either urticaria or erythema coming first. There may be more than two rashes of the same or different variety following one another. The time of appearance of these rashes varies from the second to the eighteenth day after injection, exceptional cases occurring at earlier or later periods, but the vast majority occurring from the seventh to the ninth day after injection. The dose does not affect the severity or time of appearance of the rash; doses of 4000 units, 8000 units, 12,000 units, 20,000 units, and 24,000 units may all cause a rash on the eighth day; 4000 units may cause it on the second day or 8000 units on the eighteenth day. Multiple doses given at intervals of a day do not affect the time of the appearance of the rash, but if a patient has had antitoxin administered a month or two previously the rash which is caused by a subsequent injection comes out very early, in some cases from 20 to 30 minutes after the injection. The rashes last for two or three days as a rule; they often last for a week and sometimes for 16 days.

Urticarial rash.—The wheals occur in groups and vary in size from a papule to a patch of half the size of an adult hand. They disappear quickly and leave patches of simple erythema and they are replaced by fresh ones. A wheal may come and go in half an hour and successive crops may come out at intervals of from one to four days. Itching is present and there may be urticaria factitia. The distribution is usually general. The favourite places on the trunk are the seat of injection, the shoulders, and the buttocks. Both the flexor and the extensor surfaces of the limbs are involved, but the latter more frequently than the former, and patches tend to collect round the joints. The neck, the cheeks, and the eyelids are commonly affected. The rash frequently begins at the seat of injection and may remain limited to this area and in a few cases the limbs alone are affected. Œdema of the cellular tissues often accompanies the urticarial eruption. The eyelids, the base of the nose, the cheeks, the lips, the scrotum, the prepuce, the labia majora, and the dorsum of the feet and the hands are the parts commonly affected; sometimes the whole of a limb is swollen or in rare cases the whole of the body. The œdema lasts from one to four days and may be accompanied by enlargement of the lymphatic glands.

Erythematous rashes.—Of these there are four types: (1) resembling erythema multiforme, either clearing up in the form of rings or not and sometimes becoming hæmorrhagic; (2) simple erythema in patches; (3) scarlatiniform, resembling scarlet fever; and (4) morbilliform, resembling measles.

1. The first variety consists of maculæ, which may or may not be raised and which vary in size from that of a papule to about that of a shilling. Large patches are formed by fusion, which may involve the entire circumference of a limb, or the maculæ may be chiefly discrete and on the trunk especially they tend to be small, frequently giving rise to a very coarsely punctate appearance. The fusion into patches is especially marked on the extensor surfaces of the joints and sometimes the skin desquamates in this situation and gives rise to the appearance of psoriasis. The maculæ are bright red or almost purple in colour and are sharply defined, the intervening skin being normal. Occasionally a few tiny vesicles may be seen on their surface. If the maculæ and patches clear up in the form of rings the latter may join together, forming gyrate figures, or they may be small and more or less discrete. On the trunk and opposite the joints huge rings may be formed and on the trunk a large ring may sometimes be seen having its periphery formed of tiny macules more or less fused with free macules dotted round its circumference and the centre fawn-coloured and slightly desquamating. In a few cases the rash becomes hæmorrhagic and a mottled pigmentation is left for a few days. There may be a little desquamation and sometimes there is itching. The distribution of the rash is more definite than in the urticarial variety. On the limbs it is much more common on the extensor than on the flexor surfaces and it is also more profuse on the extensor aspect, especially round the joints where large patches or rings are very frequent with small macules extending up and down the limb. The rash occurs scattered over the front and back of the trunk, forming large patches at the seat of injection (in the loin) and on the buttocks. It may be present on any part of the face and sometimes behind the ears. It may commence on the limbs, but very frequently at the seat of injection, and its distribution is usually general although it may be limited to the limbs or the seat or seats of injection.

2. The simple erythema consists of non-raised, ill-defined, bright red patches of irregular shape producing a blotchy appearance. It is most frequently the result of wheals, but it undoubtedly may occur independent of them. It occurs commonly at the seat of injection where it sometimes extends from the loin on the back and the abdomen as a punctate erythema. It forms patches on the cheeks and on any part of the trunk and limbs. These erythematous patches are very fugitive and it is often very difficult to say whether they are or are not the result of wheals. In some instances, as on the buttocks, they are due to pressure. There is no desquamation.

3. The scarlatiniform rash occurs very early and when the patient has had a previous injection some time before. In one case the patient had had antitoxin administered five months previously and the rash came out on the day following the injection of 4000 units; this rash lasted for one day and was replaced by an urticarial eruption lasting for four days; a macular rash then appeared for two days and finally a crop of wheals for one day. The rash is a scarlet punctate erythema, thickest round the seat of injection, where it forms a bright red flush. It is often thicker on the extensor than on the flexor surfaces of the limbs and frequently clear patches of skin are visible. It may occur in patches only, chiefly on the trunk, and is then combined with other rashes. When general it may be distinguished from scarlet fever by the usual absence of vomiting, the rapid disappearance of the rash, and the occasional patches of clear skin. It may also be accompanied by other rashes; desquamation does not usually occur and the rise of temperature may be slight.

4. The morbilliform rash is more frequent than the scarlatiniform and is commonly preceded by an urticarial eruption, but it may occur alone. This rash is a macular erythema like measles, but it may begin on any part of the body and especially on the limbs, where it is more profuse than on the trunk and face. It is thickest on the extensor surfaces of the limbs, forming patches round the joints, and may be seen behind the ears. Patches of clear skin may be seen and there may be ring-formation during the disappearance of the rash, which as a rule leaves no desquamation. There is conjunctivitis and frequently swelling of the lids, but sneezing and cough are as a rule absent. The rash lasts from three to four days and there are commonly pains in the limbs. Fever may be absent, but as a rule the temperature suddenly runs up to about 103° F. when the rash appears and falls either just before or when it disappears. Six out of the 100 cases were of this variety. Four appeared on the fourteenth day after injection (the incubation period of measles being on the average about 10 days) and had doses respectively of four, 12, 16, and 24,000 units. The remaining two appeared on the twelfth and

fifteenth days and each had a dose of 12,000 units. Five were preceded by an urticarial eruption and one by urticaria and macular erythema combined at the seat of injection. It is interesting to note that the scarlatiniform rash comes out much earlier than the morbilliform variety and that the incubation period of scarlet fever is from two to four days as compared with that of measles which is 10 days. By attention to the above points these two important rashes can generally be diagnosed from scarlet fever and measles respectively.

PAINS.

The joints and surrounding tendinous and muscular structures are affected and there may be a little swelling of the joint, but it is quite the exception to find much fluid in the joint and the skin over it is usually normal. In some cases the pains and temperature simulate acute rheumatism. The pains shoot about and shift from joint to joint and there is also constant aching and intense pain on movement. There may be headache and furred tongue and sodium salicylate produces no relief. This condition lasts for three or four days and in one case it lasted for nine days. In other cases there may be simply a little aching in one or two of the joints which lasts for a day or two. When the pains have gone stiffness on moving the limbs is complained of. The joints most commonly affected are the knees, the remaining joints of the limbs being affected about equally. The hips, the knees, the wrists, and the hands are more commonly affected alone than any other joints. The vertebral column is also frequently affected and stiffness and pain in the neck and the back are complained of. There is commonly pain in the temporo-maxillary joint on opening the mouth and less frequently in the sterno-clavicular articulation. There is sometimes pain down the inner side of the thighs, in the popliteal space, and in the muscles of the calf. The pains occur with all forms of rash and the temperature in these cases is usually coincident with the pain, except in the morbilliform cases, when the temperature is coincident with the rash. There may be a thick rash and shooting pains without any rise of temperature at all. The rash is frequently more profuse around the affected joints and it may begin in one limb which is first affected by pain. The rash usually appears first and the pain may occur at any time during the course of the rash or exceptionally after it has disappeared. Less frequently the pain may begin and the rash appear in a day or two. The rash may start at the seat of injection and when the limbs are attacked the pains appear.

FEVER.

A rise of temperature occurs most frequently with rash and pain, next with rash alone, and rarely with pain alone. On referring to old notes of cases rises of temperature are found at periods corresponding to those of the appearance of the rashes without anything to be noted to account for them, but personally I have not observed a case of fever alone without either enlarged glands, otitis media, or some other cause. Fever occurs about equally with all forms of rash and when associated with both rash and pain is almost always coincident with the pain except in the morbilliform cases. When associated with rash alone it generally appears with the rash and may last throughout or disappear in a day or two. The rash may appear first and sometimes the temperature only rises during the latter half of the period of the rash. In some cases the rise of temperature may precede the appearance of the rash. The course of the temperature curve is irregular and its height may be anything between 100° and 105°, being especially high when associated with pain or in the morbilliform cases. Of the 100 cases 26 had fever associated with rash and pain, 17 had fever with rash alone, 46 had rash alone, and 11 had rash associated with pain.

ALBUMINURIA.

Of the 100 cases 54 had albumin in the urine, and of these in 25 it was present before the rash appeared. This leaves 29 cases in which there was albuminuria during the course of the rash. In 24 of these cases there was a trace of albumin only and it lasted from one to three days, and in two cases for six days, disappearing before the rash had gone. In the remaining five cases the albumin was present in considerable quantity and outlasted the rash in three cases, disappearing with it in two cases. Neglecting these five cases there remain 24 cases in which a trace of albumin appeared in the urine after the rash had come out and disappeared before the rash. 11 of these cases had more or less fever at the time, hence there are left 13 cases out of the 100 with nothing to account for the albuminuria except that it was coincident with the rash. It may be argued that this albuminuria was a result of the disease itself, but on referring to the report for 1896 of the Metropolitan Asylums Board I find that the percentage of albuminuria for that year when antitoxin was used was 53·4 as compared with 24·1 in the year 1894 when no antitoxin was used. During the year 1896 every case of albuminuria, however slight, was included; but in 1894 at some of the Board's hospitals these slight cases were neglected, hence the percentage 24·1 is probably not high enough. However, under any circumstances there must have been a considerable difference in the two percentages, and I take this as an evidence in favour of the fact that the 13 cases I have mentioned above were the result of the serum. The amount of albumin was so slight and it lasted for so short a time that no possible harm could have resulted to the kidneys.

ABSCESS.

Abscess at the seat of injection is no doubt due to infection through the needle and is usually found in septic cases and in those complicated with scarlet fever. It is recognised in a few days as a tender, deep, localised swelling, the skin over it being normal. It readily heals up on being incised.

BRUISING.

This occurred round the seat of injection eight times in the 100 cases. It may be at first of the size of a shilling and increase very little, or it may spread to the size of the palm of the hand. It appears in from one to four days after the injection, and lasts from four to seven days. In three cases the bruising was surrounded by a zone of small macules; in one of these the erythema came out with the bruise on the day after injection and disappeared on the following day, leaving the bruise. In the other two cases the bruising came out on the third day after injection and the erythema two days subsequently; the latter became hæmorrhagic, lasting for seven days.

SLOUGHING.

As far as I am aware there is only one case of sloughing on record. The patient was one year and 10 months of age certified as diphtheria, 6000 units of antitoxin being injected. On the next day the case was found to be scarlet fever. 18 days afterwards the patient developed laryngeal diphtheria and 8000 units were injected into the left loin. Half an hour after this latter injection there was a general eruption of wheals and on the following day a bruise appeared at the seat of injection which was surrounded by a red flush. Bullæ then formed upon the affected skin which subsequently sloughed over a considerable area, the underlying muscles being exposed. The child who was seriously ill with scarlet fever and diphtheria died at the end of 15 days.

CONSTITUTIONAL DISTURBANCE.

Three cases of this description occurring soon after the injection are published in the appendix to the report of the Antitoxin Committee of the Clinical Society of London. In each case the patient had had previous injections and each recovered. They all occurred during the year 1897 at the Homerton Fever Hospital and were female children aged respectively four years, six years, and three years. The first patient (35 days previously) had 12,000 units injected in three doses. 20 minutes after an injection of 4000 units the patient had a rigor and convulsions with a temperature of 105° F. When this passed off the child vomited several times and on the following day there was a mixed urticarial and erythematous rash. The second patient had 4000 units 37 days previously and 30 minutes after the injection of 4000 units had a rigor and became quite collapsed with a temperature of 105°. On the following day a mixed erythema and urticaria appeared at the seat of injection. The third patient had been given 14,000 units 47 days previously and 15 minutes after 4000 units had been injected the patient vomited and was covered with a general urticarial eruption. Two hours later she had a rigor with collapse and six days later still a macular erythema appeared.

In conclusion, one may say that the complications of antitoxin are at times very painful and inconvenient but quite harmless, the only exception being the case in which sloughing occurred, and in that case the child was in an exceedingly bad condition as the result of scarlet fever and diphtheria combined when the antitoxin was administered.

Homerton, N.E.

ON CERTAIN VARIATIONS IN THE MOTOR PHENOMENA OF CHOREA.[1]

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[*Preliminary note.*—After I had obtained nearly all the autographs which are here reproduced and had formed my deductions from them my attention was called to a paper published by Dr. Weir Mitchell and Dr. Wallace Rhein in the *Philadelphia Medical Journal* of Jan. 22nd, 1898, in which they divided cases of chorea into certain groups according to the character of the handwriting. These groups correspond mainly, though not entirely, with those into which I have independently arranged my own cases. I should, of course, have refrained from publishing this paper were it not that my own investigation was conducted without any knowledge of the work of Dr. Mitchell and Dr. Rhein and that the latter, as far as I can ascertain, has passed unnoticed in this country. A study of the literature of the subject will be found in the paper referred to, and this is so complete that it is unnecessary for me to go further into the matter.]

It is generally believed that the motor phenomena of chorea are of a very uniform character, especially as regards the effect thereon of attempted voluntary movements. It is true that certain writers make reference to the possession by some patients of the power of controlling to some extent the typical movements of the disease and that a few even speak of the existence of an incoördination which may occasionally be out of proportion to the severity of the movements themselves. Nevertheless most writers on chorea are in agreement with Professor Henoch when he sums up the matter by saying that "under all circumstances any purposive movement tends to make the chorea worse; any attempt to write, to take hold of small articles, to raise the arms above the head, &c., causes the choreic movements to increase considerably."

My attention was accidentally called to the incorrectness of such statements. Having for some time wished to find some means of registering the severity and progress of my cases of chorea in order to investigate the efficiency of drug treatment it occurred to me that the handwriting of my patients might afford the means of which I was in search. I therefore began to take specimens of writing from all my choreic patients, with the result that in a very short time I realised that there existed very unexpected variations in the power of writing and that these variations in many cases held no relation whatever to the violence of the choreic movements. The writing was therefore useless for my purpose and I have continued the study of the writing for its own sake. In my cases—all of which, with one exception, have been met with in my out-patient practice—I have recognised the existence of five groups, separated from one another by differences in the manner in which they reacted to the demand to perform delicate coördinated acts, and of each of these groups I have reproduced the most typical of the autographs.

1. The first group contains those cases which accord with the descriptions usually given—that is, in which the interference with voluntary action corresponds with and directly proceeds from the typical choreic movements. It is hardly necessary to say that in the slight cases little or no disturbance is to be traced, whilst all degrees are met with between these and cases in which the interference is of the most marked description. Of this group I present four specimens (Figs. 1, 2, 3, and 4).

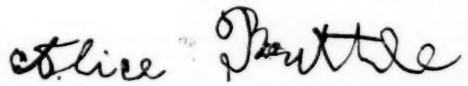
The late Dr. Sturges gave in his monograph on Chorea an excellent description of what happens when a choreic patient belonging to this group attempts to write. He says: "When a choreic child improves sufficiently to maintain some feeble and precarious grasp the first attempt at writing some easy word begins with much purposeless flourishing of the pen-point over the place until at length it hits the paper and shapes a letter or two. Then follow further superfluous hoverings in the air, when again the pen alights and more is added. So the task progresses by snatches and what the written word signifies is a number of detached motor acts, now more now less feeble, the intervals being surrendered to mere riot." In watching this process in the cases with which I am now dealing it has always seemed to me that the ability to write at all depends ultimately on the power of more or less inhibiting the movements for a short time. If no such power exists at all the child will rarely be induced to make the attempt, though in the out-patient room, at any rate, such cases are seldom met with. When, however, there is enough control to render some attempt possible the performance is a very striking one. The preliminary flourishing of the pen which Dr. Sturges describes ends in an obvious effort whereby the choreic movements are for a moment inhibited, and during the pause thus brought about one or two letters, or part of a letter, are written. The difficulty, however, becomes steadily greater as the act progresses and the last stroke of the pen before the outbreak occurs is generally traced slowly and with special effort. Then at last a sudden end comes to the power of control and as though by an irresistible urgent command a period of wild and greatly increased movement is perforce indulged in. Again the movements subside a little, inhibition becomes again possible, and another effort is made with results as before. Hence it is that the individual lines of even the bad examples of handwriting rarely show a degree of irregularity such as would naturally be expected.

Figs. 1, 2, and 3 show the results produced according as the period of inhibition is longer or shorter. Thus, in the case of Violet Woodhall (Fig. 1) the control was

FIG. 1.

very imperfect and fleeting, and frequently did not extend through the time necessary for the completion of even a single letter. Hence the writing is greatly interfered with and the excursions of the pen are large. In the case of Alice Brittle (Fig. 2) the inhibition lasted longer and there

FIG. 2.



was often time for the continuous tracing of one or two letters; but between these the movements were very pronounced. Louisa Day (Fig. 3), on the other hand, was able to keep her movements more or less in check whilst she wrote the whole of her surname; hence the writing

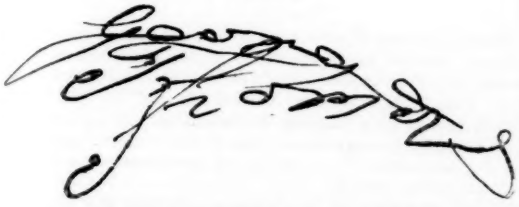
FIG. 3.

itself is fairly good and it is the intervals between the initials which represent the periods of movement. Another effect of the irresistible necessity for movement which the child knows will shortly make itself felt is seen in some cases in the attempt to get through as much as possible of the proposed task before the outbreak occurs. This is seen in the writing of George Thomas (Fig. 4) whose autograph was written at great speed and with much flourishing of the pen in the interval between the two names. Finally, it may just be mentioned that in the mildest cases of chorea no defect of writing is seen beyond a marked thickening of the down strokes of the letters. This is due to the tendency to maintain an unduly

[1] A paper read before the Birmingham and Midland Counties Branch of the British Medical Association on June 12th, 1899.

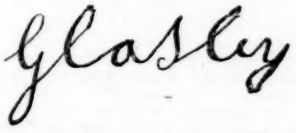
rigid grasp of the pen and is, as I suppose, the expression of the effort made even in these cases to control the slight choreic movements.

FIG. 4.



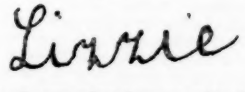
2. The second group consists of cases in which a more or less complete control over the movements can be exercised even though they be of considerable severity. Of this group I present three specimens (Figs. 5, 6, and 7). These autographs were all executed by children who were suffering from a severe attack of chorea; yet none of them show any material disorder of writing. Indeed, they are on the whole good specimens considering that they come from young children belonging to the uneducated classes. The first case (Fig. 5) was one in which there was ceaseless choreic move-

FIG. 5.



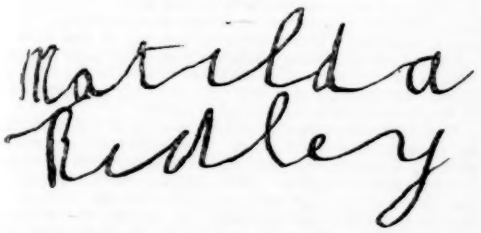
ment of the arms and legs. Yet on writing the pen was held with perfect steadiness and with the exception of an occasional stop in the process it was in all respects normal. The second case (Fig. 6) was one of well-marked right-sided

FIG. 6.



chorea, though of somewhat less severity than the former and the writing is certainly good for a child only eight years of age. The remaining case (Fig. 7) was of greater severity than either of the two preceding cases and, indeed, needed

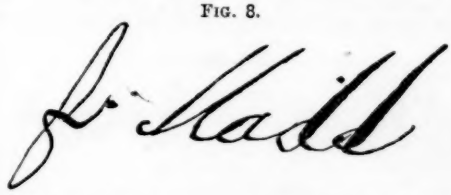
FIG. 7.



admission into the hospital. Yet, although the right side was especially affected and the movements were of great extent and wildness, almost perfect control was exercised during the act of writing. A specimen of the writing obtained after recovery showed no very great difference from that presented here.

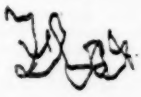
3. The third group contains cases in which, although there is apparently no chorea—or but the slightest—of the right side, yet the act of writing is greatly interfered with. Three examples of this group are shown (Fig. 8, 9, and 10). The case of Fanny Maddox (Fig. 8) was one of apparently pure left-sided chorea. The right hand showed no choreic movement and the hand and arm were held horizontally out with perfect steadiness. Yet the attempt to write resulted in great disorder and on two occasions was given up as impossible before the completion of the name. Florence S——

FIG. 8.



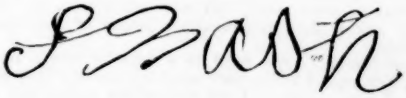
(Fig. 9) was suffering from considerable chorea of the left side and but the slightest on the right. On holding the hands and arms horizontally out the left fingers were hyper-extended and subject to constant irregular movements, but on the right side

FIG. 9.



there was no trace of either defect. Yet, again, the attempt to write produced such extreme disturbance as to render the act practically impossible. Finally, Samuel Nash (Fig. 10), an intelligent boy, aged 12 years, showed nothing beyond an

FIG. 10.



occasional twitch of one or the other finger, but the attempt to write produced marked disorder of movement. The pen was held clumsily and although the hand was steady the movements of the fingers were ill-judged and the letters were ill-written and irregular. His ordinary writing was said to be good.

It has appeared to me that in these cases the disorder has arisen from an inability to bring into coördination with one another the fine movements involved in writing. Not only were there practically no choreic movements during rest, but none were developed by the act of writing. I should add that I cannot be quite sure that this was entirely true of the case of Florence S—— (Fig. 9). This case was one of the earliest met with and both my notes and recollection are a little imperfect. Moreover, the writing suggests the possibility that some true choreic movements may have been developed and I do not feel myself justified in stating positively that this was not the case. The above description, however, is entirely accurate of the two other cases, as of several others of which I have not reproduced the writing.

The slightest tendency towards incoördination is frequently seen in an inability to combine the onward movement of the hand with the movement of the fingers. When this is the case the hand remains in the same spot on the paper, whilst the fingers become more and more crowded together, until at last a pause has to be made whilst a new position is taken up. The result is a characteristically cramped handwriting which is often seen in mild cases of chorea.

4. The best demonstration of the existence of a disorder altogether different from and independent of the choreic movements is seen in the fourth group of cases of which I have only come across a single example. It resembles the second group in the complete control which can be exercised over the movements; but, unlike that group, a marked defect of writing remains behind. Fig. 11 represents the attempt of a child named Bertha Kendall to write her name. The case was a very bad one and I hardly thought it worth while to ask her to try to write, feeling sure that even the attempt would be beyond her power. To my surprise, however, on taking hold of the pen her right hand became perfectly steady; nevertheless, the writing was quite unintelligible. This failure again seemed to be due almost

entirely to an inability to properly guide the delicate movements of the fingers, although there may possibly have been in addition some degree of mental impairment. This group may be contrasted with the second, in which as soon as the choreic movements were controlled the patients were

FIG. 11.

able to write with ease and in which therefore the element of incoördination must have been entirely, or almost entirely, absent. I believe, however, that incoördination plays a considerable part in the disorder of many of the cases included in the first group.

5. The fifth group contains two cases only and in these there was either complete or almost complete inability to write at all, although the choreic movements were of very moderate severity. This inability arose, I am inclined to think, mainly from intellectual defect. In the first of the two cases the attempt to write resulted in the production of nothing more than a few meaningless scratches on the paper, yet the choreic movements were by no means severe. It is interesting to note that the power of speech was in this case almost abolished, "yes" being the only word spoken, and that with much difficulty and after long hesitation. As far as I could judge from this one word, the articulation was not greatly at fault. The second case was that of a boy who succeeded with the utmost difficulty in writing the first two letters of his name and appeared then to lose all idea as to what was to come next. His movements were also slight. Speech was a mere unintelligible jargon of considerable volubility.

In conclusion, I must refer to a question which may be raised with regard to my cases—namely, whether they are all cases of true chorea. I am well aware that it has been maintained by some observers that the power of controlling choreic movements during voluntary action is met with only in cases of hysterical chorea; but my own experience directly contradicts this belief. I have carefully watched my cases from this point of view and have moreover kept nearly all the patients under observation during their illness, and I can positively say that all the cases upon which my paper is based were, so far as I am capable of forming an opinion, instances of true chorea, and ran the ordinary course of that complaint. On the other hand, I give one more illustration (Fig. 12), namely, the autograph of a girl who was obviously

FIG. 12.

suffering from hysterical chorea, and here it will be seen that even the slight power of control exercised temporarily by the cases in the first group is entirely wanting, and that the individual lines of the letters possess in consequence a jerky irregularity which is not seen in any of the other specimens.

To sum up, the cases belonging to the five groups may be described as follows: (1) little or no power of control over the movements, incoördination probably present in at least many of the cases; (2) power of control practically complete, no incoördination; (3) no choreiform movements or movements very slight, much incoördination; (4) control over choreic movements perfect, great incoördination; and (5) movements moderate, much central defect, writing impossible.

Birmingham.

MATÉ OR PARAGUAY TEA.

BY GORDON SHARP, M.D. EDIN.

DURING the past 60 years maté or Paraguay tea has been at intervals brought before the notice of the profession as a substitute for China tea. In the *Pharmaceutical Journal* of July 16th, 1898, Professor McKendrick and Dr. D. F. Harris have given a summary of the chemistry of maté and have asked for a more extended trial of the beverage. After reading this article I resolved to try the beverage on my patients and on myself.

Maté is a native of the Argentine Republic and other parts of South America. It belongs to the same natural order as the common holly and it is known by the botanical name Ilex paraguayensis, although six at least species of ilex are grouped under the one specific name. Maté is also known as "Jesuits' tea" and "St. Bartholomew's tea," so that Europeans probably owe their knowledge of maté to the disciples of Loyola. Like tea and coffee maté contains as its chief constituent caffeine (or theine). And here let me remark how widely distributed over the vegetable world are the caffeine-containing plants. China tea belongs to the tea or camellia order, coffee to the madder (Rubiaceæ) order, guarana to the soapwort (Sapindaceæ) order, kola to the silk-cotton or chocolate (Sterculiaceæ) order, and maté, as I have said, to the holly order (Aquifoliaceæ). Besides caffeine maté contains a peculiar tannin, traces of ethereal oils, wax, a glucoside or glucosides, choline (a substance which acts like curare or muscarine), and a fatty body to which maté owes its peculiar flavour. The proportion of caffeine is, on the average, not much different from that found in tea or coffee. The maté leaves and small twigs are gathered, dried, and roasted. The roasting develops the aroma. In the Argentine Republic the leaves are said to be left whole, but in Brazil the maté is found in a powdered state. The maté which I had was made up of powdered leaves, pieces of twigs, and evidently dried berries, so that my sample may have come from Brazil.

The advantages claimed for maté are (1) that the infusion may be boiled without deterioration and may be taken hot or cold; (2) that the tannin is highly soluble and interferes little or not at all with gastric digestion; and (3) that the beverage acts as a cerebral depressant and therefore does not keep one awake at night as tea and coffee do. The tannin of maté does not tan leather, neither does it coagulate a solution of gelatin. With perchloride of iron it gives a greenish colouration instead of the inky fluid given by an infusion of China tea. I have compared a solution of egg albumen when acted upon by infusions of maté and China tea. With maté the egg albumen is sent down as a fine white precipitate which on shaking is readily mixed with the fluid and which only slowly settles down. With China tea, on the other hand, the egg albumen separates out into a brown precipitate which floats on the top of the fluid in small pellets and when shaken up at once separates and collects on the top. This may be said to be the case for maté. The opposite side will appear in my own experience of the beverage to be mentioned presently.

Maté is prepared in the ordinary manner of China tea and the same quantity is employed. The Brazil maté, on account of being mostly in fine powder, has to be strained through a fine wire sieve or muslin. Even then a sediment is found at the bottom of the cup and a large part of this is found to be fine sand which gets in during the roasting of the leaves and twigs. The beverage may be drunk with sugar and cream or with a squeeze of lemon. Personally I prefer the lemon. The colour of the infusion is a light green and thus it lacks the inviting appearance of China tea or coffee. The aroma is peculiar and repellent although one is said to get over this. If a cupful of the beverage is allowed to stand for a few minutes a waxy or fatty substance collects on the top and if this be skimmed off and tasted it is found to have the extreme flavour of the beverage. The South American native does not prepare the beverage in the manner which I have mentioned. He makes a round hole of the size of a halfpenny in a pepo or gourd and scoops out the contents. This is his teapot or maté (hence the name the tea has received). This gourd he fills with tea, pours in boiling water, and inserts a long strainer

like our teaspoon strainer, only with a hole running along the length of the handle. Through this long strainer he sucks the beverage as he carries his teapot about with him, and he sucks and fills all the day long and without either sugar or cream. This strainer is called a bonibilla, although the name is often given to combined gourd and strainer.

Personal experience.—Before detailing my experience I may say that I have asked my dyspeptic patients to try the maté, but they have all declared themselves unable to overcome the peculiar flavour and have preferred the dyspepsia to the maté. My reason for trying the maté was for the purpose of benefiting my patients. We are all now and then driven from pillar to post to find the smallest novelty for those nervous creatures whom every practitioner in time collects around him. I began myself by infusing for five minutes one teaspoonful of powdered maté in a breakfast-cup of boiling water. This was taken hot with sugar and cream, sometimes immediately before and sometimes immediately after dinner. The flavour was far from pleasant, nevertheless I gulped the fluid down. For the first three days there was nothing to note except the ever-present sensation of maté flavour and I did not feel inclined for my usual amount of China tea and tobacco. On the fourth day, one and a half hours after drinking the maté, I felt so sick that I had to lie down and stop tobacco for the rest of the day. The beverage had evidently some soporific action for I fell asleep. On the next day I felt sick and inclined to vomit about the same time after drinking it and had to get out into the open air. On the following day I still continued the beverage. I did not have the sensation of nausea, but I felt far from comfortable. On the day following there was no nausea, but three hours after taking the beverage I noticed that I could not ascend a hill with the customary rapidity. At this stage I had to cut off one breakfast-cup of tea a day (I take three a day as a rule) and I had to curtail my allowance of tobacco. The beverage was continued for a week longer and now and again I felt the same heaviness in the legs and I was drowsy now and then, but I had no more sensations of nausea. The flavour of the maté was before me at all times, even in the night if I chanced to wake. Two days I had dull, drowsy headache of a kind unknown to me. The beverage appears to have some laxative action. At this stage I stopped the maté. I found that I could not enjoy my pipe; in fact, I was gradually being weaned from tobacco—and I like the weed. After a week's stoppage I started the beverage once again, this time taking it with juice of fresh lemon instead of sugar and cream. This I found pleasanter than sugar and cream, but after all it needed some effort to overcome the peculiar aroma and soon I left off the beverage altogether and concluded that I could not with justice inflict it on my worst patient. Of course individual peculiarity must always be allowed for in this as in all other therapeutic experiments, but after allowing for all this I hardly think maté is ever likely to be used by those who have once experienced the delights of well-prepared China tea or coffee. There may be something in the climate and surroundings of South America which makes maté tolerable in those parts.

The physiological action of an ethereal extract of maté.—250 grains of maté were exhausted with absolute ether. The resulting green extract (which had the aroma of maté) was further treated with absolute ether filtered and dried at the ordinary temperature. The extract contained probably wax, fat, colouring matter, resins (if any), glucoside, and choline. The whole of this extract was swallowed just before a full meal. The effects noted were as follows. In an hour there was nausea with saliva rising into the mouth, and vomiting was only with a great effort averted. This sensation continued more or less for six hours—that is, till bed-time. Two hours after taking the extract there was great discomfort in the region of the transverse colon, but no diarrhœa. These conditions were crowned by a sleepless night and a headache next morning which disappeared after breakfast. The aroma of maté is a constant companion all the day following the taking of the extract. The extract may have had some slight diuretic action. The maté remaining after exhaustion with absolute ether was examined and was found to contain caffeine and tannin as its chief constituents. An infusion tasted strongly of tannin and was found to be a most insipid beverage, showing how little caffeine has to do with the exhilarating properties of the caffeine-containing plants. This is experienced in the case of China tea. The high-priced teas which have a fine aroma and pleasant refreshing properties often contain little caffeine, while the cheap teas may contain a large proportion but are almost devoid of aroma.

There can be little doubt, I think, that maté has not a flavour peculiar to itself but has simply that of the holly order to which it belongs, for I roasted some ordinary holly leaves and found the aroma similar to that possessed by maté.

Leeds.

A CASE OF
PERFORATED GASTRIC ULCER; OPERATION; RECOVERY.

BY CHARLES R. BOX, M.D., B.S., B.Sc., M.R.C.P. LOND., F.R.C.S. ENG.,
RESIDENT ASSISTANT PHYSICIAN TO ST. THOMAS'S HOSPITAL;
AND
E. OWEN THURSTON, M.B., B.S. LOND., F.R.C.S. ENG.,
LATE SURGICAL REGISTRAR TO ST. THOMAS'S HOSPITAL.

A FAIRLY nourished but somewhat anæmic-looking girl, aged 17 years, was brought to St. Thomas's Hospital at 1.30 A.M. on Jan. 7th, 1899, complaining of violent abdominal pain and sickness. Inquiries elicited the following history. For several years the patient had been under medical treatment for pain after food and occasional sickness. For the past 12 months her pain and discomfort after food had been so great that she at times limited herself to a diet of bread, butter, and milk, feeling much relieved by so doing. Twice during the same period she had vomited small quantities of blood, the last occasion being in October, 1898. For a few weeks before admission she had been taking an ordinary diet without experiencing any great discomfort. At 2 P.M. on Jan. 6th, 1899, she was seized with violent abdominal pain. She had just before partaken freely of steak pie. A seidlitz powder was given but it only produced vomiting. There was no blood in the vomit. The pain continued unabated till she was admitted to hospital 12 hours later. The abdomen was then motionless, moderately distended, and generally tender. Rigidity of the walls was very slight and did not interfere with examination. No localised tender spot could be found. There was no evidence of free fluid in the abdomen. The liver dulness began at the sixth rib and continued downwards for two and a half inches, disappearing one and a half inches above the costal margin. The pulse rate was 124 and the beat was strong. The temperature was 100·2° F. There was no evidence of disease of the thoracic viscera and the urine was free from albumin. After removal of the patient to bed it was found that the liver dulness in the nipple line had diminished considerably and that it was now restricted to a rib's breadth. The abdominal signs were slight but definite and these, coupled with the very circumstantial history of gastric trouble and the abrupt onset of pain, were thought to justify the diagnosis of perforated gastric ulcer and to call for immediate operative interference. The patient's general condition was exceedingly good.

Thirteen and a half hours after the onset of the symptoms the abdomen was opened through the left rectus muscle close to the middle line and above the umbilicus. A little turbid fluid escaped on incising the peritoneum and a large stomach immediately presented. As a little fibrinous exudation was present near the pyloric extremity of the viscus and on the under surface of the liver search was made in this neighbourhood for the ulcer but none was found. A small perforation of about an eighth of an inch in diameter was ultimately discovered on the anterior surface of the stomach near the cardiac orifice and just below the lesser curvature. Free access was gained to the perforation by prolonging the abdominal incision as far as the ensiform cartilage and dividing the left rectus transversely. The perforation, through which gas and gastric contents bubbled, was found to be surrounded by so extensive a zone of induration that excision was out of the question. The whole indurated area was therefore inverted by Lembert sutures. Complete inversion was necessary since sutures passed through the indurated area itself would not hold. A second row of sutures was passed to reinforce the first. All exudation in the neighbourhood of the perforation having been removed, the peritoneal recess above the costo-colic fold was carefully cleansed by sponging, previous experience with

unsuccessful cases having impressed upon us the necessity of paying particular attention to this region. On investigating further a quantity of turbid greasy fluid was found in the pelvis, so the latter was drained by a counter opening above the pubes. The general peritoneum, but not the lesser sac, was now thoroughly irrigated with sterilised water and all excess of fluid was removed by sponging. A Keith's glass tube was introduced into the pelvis and a gauze drain through the upper wound to the site of the ulcer. The upper wound was then almost completely closed. The operation lasted 40 minutes; there was remarkably little shock and the pulse-rate, which was 120 at the beginning of the operation, was 132 at the end. The anæsthetic used was ether.

The patient was comfortable after the operation. She had very little pain and she slept well. At 10.30 A.M. on Jan. 7th she vomited half a pint of odourless brown fluid. The pulse rate was now 120 and the temperature was 98·2°. The tongue was rather dry. The abdomen was not distended and was moving freely in respiration. A considerable amount of blood-stained discharge was escaping through the pelvic drainage tube through which a gauze drain was now introduced. The patient was being fed by the rectum and having in addition in the same way a pint of normal saline solution twice daily, also three ounces of brandy. The glass drainage tube was removed from the pelvis after the lapse of 32 hours and the bowels were relieved by a simple enema. The aspect of the patient was good and her pulse rate was gradually falling. Vomiting, unaccompanied by much retching, still occurred at intervals and the abdomen became generally but slightly distended again. On the evening of the second day after the operation (Jan. 9th) five minims of tincture of iodine were given by the mouth; this was immediately rejected but the vomiting now ceased entirely. On the same day the amount of saline fluid administered by the rectum was increased to three pints on account of thirst. On the next day the bowels acted twice, the distension of the abdomen disappeared, and the pulse had fallen to 100. From this time the progress of the case was eminently satisfactory, the pulse rate continuing to fall and the temperature, with the exception of a rise to 100° on the evening of Jan. 11th, remaining practically normal. The gauze drain leading to the ulcer was removed on the 11th; it smelt quite sweet and was replaced by a small plug which was finally discarded on the 20th. Some of the stitches were removed on the 16th and the remainder on the 20th. Feeding by the mouth was commenced 11 days after the operation. At first only two drachms of peptonised milk were given every hour but the quantity was gradually increased. Three days later rectal feeding was altogether discontinued and 14 days later the patient took boiled sole without discomfort. Convalescence was retarded by a slight attack of tonsillitis and a small alveolar abscess. Within five weeks of the operation the patient was up and she finally went to a convalescent home apparently in the best of health. She remains well with the exception of a tendency to constipation and occasional slight discomfort after meals.

Several factors contributed to the successful issue of this case. The perforation was small and accessible so that there was probably but little escape of gastric contents and closure was an easy matter. The general condition of the patient was extremely good, allowing the cleansing of the peritoneum to be thoroughly effected. There was no doubt about the exposure to infection of the general peritoneal cavity, this being shown by the collection of turbid fluid in the pelvis, although the only fibrinous deposits were met with in the neighbourhood of the ulcer; it is probable, however, that the infecting material was not very virulent. The cleansing was effected by a combination of irrigation and sponging. If restricted to one of these methods we should prefer the former, both on the score of celerity and on account of the improvement often produced in the general condition. There is no doubt, however, that by sponging the peri-hepatic and the peri-splenic regions can be more thoroughly cleaned and the risk of residual abscesses in these situations is minimised. With regard to the drainage of the pelvis our experience has been that it is a very necessary adjunct in these cases. It was not thought necessary to open and flush the lesser sac of the peritoneum and the result of the case justified this omission. Of course, the most important point of all is that the operation was performed without delay, while the condition of the patient was favourable and none of the toxæmic symptoms of general peritonitis were present.

For permission to publish this case we are indebted to Dr. Acland and Mr. Pitts for whom we were respectively acting at the time of admission of the case.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GENERAL HOSPITAL, BIRMINGHAM.

TWO CASES OF SPREADING TRAUMATIC GANGRENE; AMPUTATION; RECOVERY.

(Under the care of Mr. GEORGE HEATON.)

IT is now generally admitted that although the majority of cases of spreading traumatic gangrene are due to the presence of the bacillus of malignant œdema a few are connected with other micro-organisms. A few instances have been recorded of the presence of the bacillus coli communis; we published one such case in the Mirror of Hospital Practice in 1897. The first of the two cases recorded below can hardly belong to this class, for the bacillus coli communis was not the chief organism present. For the notes of the cases we are indebted to Dr. F. Victor Milward, resident surgical officer.

CASE 1.—A slightly built, pale boy, aged eight years, was admitted to the out-patient department of the General Hospital, Birmingham, on May 16th, 1898, having sustained a fracture of the left radius and ulna in their lower thirds. On the anterior surface of the forearm over the site of the fracture there was a small V-shaped wound measuring about a quarter of an inch. The wound was thoroughly cleansed with soap-and-water and corrosive sublimate solution, sealed up with collodion, and treated with splints in the usual manner. On the following day when the patient attended at the hospital the parts looked perfectly healthy. He did not come back again, as told to do, until the 20th. He then looked ill and had a highly furred tongue and a small quick pulse. He also complained of slight pain. On removing the splints the hand was found to be black and cold, the forearm was dusky, and there was brawny swelling about the elbow. Emphysema had already extended to the arm. The temperature was 103·4° F. Mr. Heaton advised immediate amputation and at 4 P.M. Mr. Ryland removed the limb at the shoulder-joint. Bubbles of gas came freely from the cut surfaces and it is worthy of note that the flaps themselves were emphysematous. The wound was dressed with iodoform gauze and drained. By 10 P.M. the temperature had fallen to 99° and there was a corresponding decrease in the pulse-rate. The boy subsequently made a very rapid recovery. On the second day the emphysema had disappeared from the flaps and the tube was taken out, on the eighth day he was up, and he was finally discharged from the hospital in about a month, a small sinus delaying his otherwise complete recovery before that time.

CASE 2.—A boy, aged nine years, was admitted into the General Hospital, Birmingham, on Jan. 5th, 1899, suffering from a compound fracture of the right tibia and fibula through their lower thirds. He had been climbing a wall, when some of the bricks gave way and fell on his leg. On admission there was found over the site of fracture a small wound about a third of an inch long which was bleeding freely and he was said to have lost much blood before admission. The wound was thoroughly cleansed with soap-and-water and corrosive sublimate solution and dressed with iodoform and sterilised gauze. On the following day the temperature was 101° F. and the urine showed a distinct trace of sugar, which, however, was never subsequently found. On the 7th at 11 A.M. the toes were noticed for the first time to be distinctly blue and there were discolouration and bullæ on the dorsum of the foot.

The post-tibial artery at the ankle was pulsating normally. The temperature was then 101°. By 6 P.M. the temperature had risen without a rigor to 105° and the pulse was 160. Later in the evening the temperature was two degrees lower but the gangrene had advanced an inch up the leg. No emphysematous crackling was present. Early next morning the general condition was fairly good, the temperature being 102°, but a yellowish discolouration had advanced to the lower part of the thigh, especially in the course of the internal saphenous vein Immediate operation having been decided on Dr. Milward amputated for Mr. Heaton through the middle of the thigh. The cellular tissue on the inner aspect of the limb where divided was markedly œdematous and of a yellowish hue Cultivations taken from this part and from the interior of the saphenous vein yielded, however, no result. The lad suffered greatly from the shock of the operation but rallied well with strychnine, brandy, and saline infusions into both axillæ. On incising afterwards the amputated foot gas came from it freely. The patient's subsequent progress was uneventful. Slight suppuration between the flaps occurred but without constitutional symptoms and he was discharged from the hospital with a perfectly healed stump on Feb. 19th.

Remarks by Dr. MILWARD.—With regard to the bacteriology of the above case Dr. C. P. White (late pathologist to the hospital and now of the Leeds School of Medicine) who investigated Case 1 tells me that he succeeded in isolating four organisms, the chief of which was the bacillus of Tricomi. He also found a few colonies of the bacillus coli communis. The bacillus of malignant œdema was not present. Dr. White's investigations on this case are as yet incomplete and I must thank him for allowing me the use of these few preliminary notes. With regard to Case 2 Dr. S. McDonald, pathologist to the hospital, has kindly supplied me with the following notes. Films from the exudate near the spreading margins, where emphysema was marked, showed numerous bacilli of various sizes and a few staphylococci. Nearer the wound were numerous micrococci and bacilli. Some of these bacilli whose appearance suggested that of the bacillus of malignant œdema could not be identified as such when successively cultivated on glucose gelatin and glucose agar. The following organisms were isolated: (1) staphylococcus pyogenes aureus; (2) staphylococcus pyogenes albus; (3) a bacillus apparently identical with the bacillus proteus vulgaris; and (4) a staphylococcus of nearly twice the size of the staphylococcus pyogenes aureus, which did not stain by Gram's method and only grew well in deep cultures, in glucose gelatin and agar, appearing there as perfectly discrete yellowish-brown colonies without causing liquefaction. Cultivated in 10 per cent. gelatin the organism grew only in the deeper parts of the tube and never on the surface. Several sub-cultivations were made from glucose gelatin and glucose agar, but the organism died out in a few weeks. The organism appeared to grow almost as rapidly at room temperature as at 37° C. There was no opportunity of testing its pathogenic properties.

Looked at from a clinical aspect these two cases, although very similar, would not appear to be quite identical. Case 1 seems to correspond entirely with the disease known as acute spreading traumatic gangrene, emphysema being particularly marked, even in parts of the limb well above the advancing inflamed area. The necrosis had advanced with its usual rapidity in these cases and constitutional symptoms were of a sthenic type, the subject being young and otherwise healthy. The necessity of leaving emphysematous tissues in the stump undoubtedly made the prognosis very grave, but its subsequent disappearance seemed to point to microbic products rather than to the actual presence of micro-organisms in this part of the limb. In Case 2 injury to blood-vessels might be suspected, but the circulation in the foot was in no wise affected until necrosis had invaded it from the site of fracture. At the time of amputation the deeper cellular planes of the thigh were in a highly œdematous and discoloured state. Emphysema was only well marked where putrefaction had occurred. The micro-organisms appeared to be mainly pyogenic, but the large anaerobic staphylococcus described by Dr. McDonald is worthy of notice. I owe my thanks to Mr. Heaton for kindly allowing me to publish these cases; to Mr. Ryland, late house surgeon, for supplying me with notes on Case 1; and to Dr. C. P. White and Dr. McDonald for their bacteriological notes.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Multiple Calculi.

A MEETING of this society was held on March 28th, the President, Mr. BRYANT, being in the chair.

Mr. REGINALD HARRISON read a paper on two cases where Multiple Calculi were removed from large Narrow-necked Sacculi connected with the Male Urinary Bladder. The first case was that of a man, aged 56 years, who came under observation in August, 1892, with symptoms of vesical calculus. A small stone was detected on sounding and was crushed, but as this was not sufficient to account for the symptoms present a median perineal cystotomy was proceeded with and 34 stones weighing over 11 drachms were withdrawn from a sac to the left of the prostate. The interval between the bottom of the sac and the rectum was very small. A drainage-tube was fixed in the sac. The patient left the surgical home in which the operation had taken place 24 days later. A perineal fistula persisted. In 1894 a suprapubic cystotomy was performed and the bladder and sac were drained by that route. As this did not appear to have any appreciable effect upon the sinus the suprapubic wound was allowed to close. The patient died in 1896 with the fistula still open. The second case was that of a man, aged 50 years, first seen in July, 1897. In that year several small friable calculi were removed from the bladder by the lithotrite and wash-bottle. About this time it was first observed that the bladder had a large sac in it which could be independently catheterised. In April, 1898, the patient suffered suddenly and acutely from cystitis, and on May 4th suprapubic cystotomy was performed. The lateral lobes of the prostate were found to be much enlarged, and to the right and a little below the corresponding ureter was the opening into a sac, just admitting the index finger. The sac was full of foul, purulent urine, and it contained several stones. The latter were removed and the pouch was washed out and a drainage tube was fixed into it as well as into the bladder. In three weeks the patient was out of bed and doing well. Towards the end of June, 1898, he had several rigors and high temperatures in spite of careful irrigation of the bladder, so the wound was reopened and the pouch was washed out and again examined with the view of draining the latter through the perineum. This had to be abandoned by reason of the relation of the sac to large vessels which could be distinctly felt by the finger, and the original mode of drainage was reverted to. The enlarged prostatic lobes were also removed. The condition of the patient was reported as being much improved. Mr. Harrison remarked that the difficulty in dealing with these two cases arose, not in the removal of the stones but in providing for the drainage and subsequent obliteration of the sacs in which the calculi were contained. He advocated the method of draining some of these sacs after their exploration by suprapubic cystotomy from the perineum, and in support of this proposition he referred to two other cases which seemed to favour this method of procedure. The origin of the calculi removed was also referred to and it was suggested that they were probably formed in the sacs and had not passed down from the kidney.

Mr. BRUCE CLARKE said that he had met with a number of these cases and he hoped to publish a paper on the subject shortly. It was doubtful whether a real distinction could be drawn between protrusions of mucous membrane alone and those in which all coats were involved. It was most difficult to identify the different coats even microscopically, especially where ulceration had taken place. Probably in cases where the mucous membrane had been destroyed by ulceration there was most chance of contraction and obliteration of the sac after removal of the calculi. The diagnosis was most difficult and often the cyst could only be discovered by an exploratory incision into the bladder which was therefore desirable in doubtful cases. For exploration Mr. Bruce Clarke advocated the suprapubic operation as a better view of the bladder could be obtained and it was easier to get at the sac. It must be remembered that in some cases the sac abutted on the peritoneum and in one case death occurred from rupture into the peritoneal

cavity. In one case he was able to catch the sac wall with forceps and invaginate it into the bladder. He kept it everted for several days before removing the forceps and it afterwards appeared to become obliterated. In those cases in which there was a large sac between the rectum and the bladder perineal drainage might be the best method of treatment.

The PRESIDENT did not agree with Mr. Bruce Clarke as to the adoption of a suprapubic incision into the bladder, holding that the bladder was better drained through the perineum. He preferred the median operation, by which the bladder was reached with great ease and with very little bleeding. Mr. Bryant gave details of one case in which there were many stones in a sac behind an enlarged prostate in which perineal drainage led to complete recovery. He had also met with others of the same nature in which stones had been successfully crushed but the symptoms persisted owing to the presence of calculi in a sacculus. Mr. Bryant mentioned one case in which he crushed a stone but no fragments could be washed out. He believed that they got into a sacculus, but the patient refused to submit to an exploratory operation. As regarded the origin of the stones all the specimens in the museums were strikingly similar in their characteristics. Mr. Bryant thought it most probable that they were formed in the bladder and dropped into the sac.

Dr. THEODORE WILLIAMS and Dr. HERBERT HORROCKS then communicated a paper on the Treatment of Pulmonary Tuberculosis by Anti-tuberculous Serum, an abstract of which we shall publish next week.

MEDICAL SOCIETY OF LONDON.

Deaths from Functional Nervous Disease.—Pathology of the Pericardium.

A MEETING of this society was held on March 27th, the President, Mr. EDMUND OWEN, being in the chair.

The PRESIDENT referred to the loss which the society had sustained in the recent deaths of Dr. Heinrich Port and Dr. John Brunton.

Dr. ROBERT MAGUIRE read a paper upon Deaths from Functional Nervous Disease which he maintained were due to exhaustion of grey nerve matter. He eliminated deaths from asthenia, tuberculosis, disturbance of the respiratory centre, heart failure, or vaso-motor paralysis, as occurring in the course of acute mania, status epilepticus, anorexia nervosa and other hysterical conditions; concussion, fright, and shock, and explained that the cases he had to describe were deaths actually from functional nervous disease. He showed that in such cases all the bodily functions failed equally, with the exception of the functions of those of the higher nervous system. In death from senile decay, the condition in which there was the most equal deterioration of the somatic powers, there was nevertheless usually a predominance of failure of one particular system, generally that of the heart, since that organ had no chance of rest. But in such cases as Dr. Maguire referred to the only system at fault was the highest nervous system and therefore he considered that the death was due to exhaustion of the grey nervous matter which controlled all the other functions. He described four cases which had come under his own observation bearing upon this point. The first was that of a woman who, without other physical symptoms, developed blindness after a fall. The case was diagnosed as traumatic hysteria, but suddenly the patient became unconscious, had unequal pupils, and perspired on one side of the head and neck. It was then thought that she must have cerebellar tumour, but, death occurring, nothing was found at the necropsy. The patient had shown hysterical symptoms before the fall. The second case was that of a young woman brought to St. Mary's Hospital in an unconscious state, in which she lay for four days before death, presenting no signs of disease except unconsciousness. There was no trace of poisoning and nothing was found post mortem. She had been greatly troubled before the attack. The third case was that of a medical student who had lived too sparingly, had had difficulty in completing his curriculum, but shortly after passing his examinations became unconscious, presenting no other physical signs of disease. It was thought that he might be suffering from encephalitis, but in three months he gradually recovered. He began practice, married, was over-worked, and in three years' time was taken ill again with similar symptoms and died. Nothing whatever was found at the necropsy. In the fourth case Dr. Maguire had diagnosed the condition during life and the diagnosis was confirmed post mortem. A clergyman of taciturn habits, living the life of a literary recluse and having undergone severe mental trials, became unconscious and showed no other symptoms. He died and nothing was found at the necropsy. In all the four cases uræmia, syphilis, alcoholism, and poisoning were carefully excluded. Dr. Maguire called attention to the case of a schoolboy, reported at one of the other societies some years ago, who became unconscious while running at "hare and hounds," and he thought that his death was best explained by exhaustion of grey matter. Dr. Maguire believed that this point of pathology of death, which seemed to have been overlooked, was of somewhat wide importance. By it he explained the sense of impending death which, of no importance in the young and those suffering from very acute diseases, was of a serious omen in the old and those who had more prolonged illnesses. These had no recuperative power. Similarly patients of an eastern nation would die if they made up their minds to die, while those of western nations, even though neurotic, had more reserve vitality and their morbid fears were of less moment. Dr. Maguire said that hints on the physiology of the subject might be obtained from a paper by Dr. Augustus Waller on the "Sense of Effort," published in *Brain*.—Dr. A. E. SANSOM said that although nothing was found by the morbid anatomist there might have been some change not yet recognised. In former days many different conditions were grouped under the name "amaurosis"—once defined as a "disease in which neither the doctor nor the patient could see anything"—which had long since been differentiated. There were other diseases in which death sometimes occurred without any discoverable lesion such as epilepsy and some cases of angina pectoris. Dr. Maguire spoke of exhaustion of the grey matter, but that was rather vague. Dr. Sansom thought that the symptoms rather pointed to failure of nutrition of that part of the nervous system connected with the vagus nerve, possibly induced by unknown zymotic causes. He suggested that some of the cases of death supposed to be due to fatty degeneration of the heart were really cases similar to those described by Dr. Maguire in his paper. Fatty degeneration was an extremely rare cause of sudden death, having been the cause in only three of 860 cases of sudden death investigated in Vienna, and in those was secondary to atheroma of the coronary arteries.—Dr. SEYMOUR TUKE said that in some respects the symptoms exhibited by Dr. Maguire's cases, especially the first, bore some resemblance to those seen in cases of general paralysis. Following their epileptiform seizures patients often lay in a semi-unconscious condition for days and emaciation often followed progressively although a large quantity of food was taken. He asked if there were any rise of temperature in Dr. Maguire's cases. In two cases of general paralysis he had seen lately there was rise of temperature before death reaching to 107° F. in one case and to 108° in the other.—Mr. PEEKE RICHARDS thought that after symptoms had existed so long there must have been changes in the grey matter had the symptoms been due to disease of that structure.—Mr. W. H. BATTLE mentioned a case with urgent symptoms supposed to be due to gastric ulcer in which the patient lived for three weeks and after death nothing whatever abnormal could be discovered.—Dr. MAGUIRE, in reply, said that the prolonged unconsciousness made it clear that the trouble was not confined to the vagus. He held that there was exhaustion of Hughlings Jackson's "highest centres." He quite agreed that there were points of resemblance to general paralysis since that was due to failure of the same highest centres.

Mr. HAROLD BARNARD read a paper on Certain Points in the Pathology of the Pericardium. (This paper we hope to publish at length in an early issue.) He observed that the pericardium was only a part of the mechanism of venous circulation which must therefore be considered with it. The researches of Dr. Leonard Hill and himself had shown that the heart could not carry on the circulation of man if he constantly maintained the erect position. The return of blood from the legs and abdomen to the heart was effected by the contraction of skeletal muscles. The muscles of the limbs forcibly emptied their veins into the right heart at each contraction during walking or running. The contractions of the muscular sphere which enclosed the abdominal viscera were a part of the respiratory movements. During

rest and sleep the enlargement of the thorax during inspiration was enough to suck the blood from the abdomen into the right heart. During vigorous efforts in addition to this suction action the abdominal walls contracting simultaneously at each inspiration forced the blood from the capacious abdominal veins into the heart. When the muscles of the limbs and the abdomen contracted together as much as a pint or two of blood might be suddenly forced into the right heart. This sudden plethora would hopelessly stretch and dilate the thin wall of the right heart were it not supported by the tough fibrous pericardium, as the leather case supports the football or the outer case supports the inner case of a Dunlop bicycle tyre. Experiments were shown to demonstrate this point and it was stated that the pericardium limited by about one half the capacity of a heart in diastole. The pulmonary circulation was largely due to the respiratory movements. The contraction of the abdominal muscles and the enlargement of the thorax during inspiration transferred blood from the abdominal veins to the lungs. The following expiration tended to pass it on from the lungs through the left heart into the arteries. The hepatic circulation was produced by the squeezing of the portal vein during inspiration. Points of pathological interest were to be found in all parts of this venous circulation. When the muscles of the legs failed to perform their functions varicose veins and œdema of the feet followed, as was exemplified in cases of Pott's fracture and flat foot. Many neurasthenic troubles were traced by Mr. Barnard to a lax and feebly acting abdominal wall in a person with a naturally low blood-pressure. The blood leaked into a capacious portal system and was not rapidly returned to the heart. The ill-filled heart was unable to maintain a constant blood-supply to the brain. Abdominal massage followed by exercises and belts was recommended for such cases. When the pericardium softened in pericarditis coughing or even moderate exercise would not only fill the heart with blood but stretch the pericardium supporting it. It seemed probable that a pericardium so dilated did not re-contract to its former dimensions. The right heart being unsupported would always become dilated and its valves incompetent with even moderate efforts. Speaking of pericarditis with effusion Mr. Barnard believed that he had demonstrated by experiments on animals that one type of the terrible dyspnœa met with in that disorder was preservative, for the violent muscular spasms were directed to forcing blood through the compressed heart. He thought that this form of dyspnœa was the imperative call for releasing the effusion, of course by the open method.—Mr. F. C. WALLIS said that it was not easy to see how Mr. Barnard's explanation held with regard to varicose superficial veins. Mr. Barnard had made out a very good case for relieving the pericardium in cases of effusion where there was great effusion. He had only seen this attempted in one case and then the patient died from the anæsthetic. Mr. Wallis agreed that the pericardium should be opened by a surgical incision and not by a trocar and considered that chloroform was inadvisable and that a local anæsthetic, preferably eucaine, should be employed.—Mr. BARNARD, in reply, said that he thought that the reason why the superficial veins became varicose was because if the person were constantly in the upright position the deeper veins were kept closed by the pressure of the contracted muscles and all the blood had to return by the superficial veins.

CLINICAL SOCIETY OF LONDON.

Abdominal Aneurysm treated by Insertion of Silver Wire.—Results of Operations for Pyloric Obstruction.—Lymphangeioma Tuberosum Multiplex.

A MEETING of this society was held on March 24th, the President, Mr. LANGTON, being in the chair.

The PRESIDENT related a case of Aneurysm of the Abdominal Aorta successfully treated by the introduction of silver wire. The patient was a woman who had had an abdominal swelling since the birth of a child three months before. She had wasted, having lost two stones in 12 months. On admission there was a pulsating tumour in the epigastrium three and a half inches in diameter which was moveable laterally but not vertically and there was a loud systolic murmur over it. In April, 1898, as the swelling was increasing and the pain was very severe, an exploratory laparotomy was performed and the tumour was found to be an aneurysm of the upper part of the abdominal aorta. A trocar was introduced into the sac and not much blood issued from the cannula when the trocar was withdrawn. As there was some difficulty in introducing salmon gut into the sac silver wire was used and five feet were introduced without difficulty. The puncture was secured with a silk ligature. There were some vomiting and a good deal of restlessness after the operation. A month later the tumour was carefully examined and it was found that consolidation was occurring. As a result of the manipulation, however, there were a return of the vomiting, a severe rigor, and collapse. These alarming symptoms yielded to treatment and the after progress was uneventful. She had been seen from time to time and there was now a hard mass in the middle line much smaller than before the operation and the thrill and bruit had disappeared. Her health was excellent. There were only a few cases of successful treatment by this method on record.—Dr. GLOVER warmly congratulated Mr. Langton on his successful operation and regretted the absence of surgeons of experience who might have discussed the paper.

Mr. RUTHERFORD MORISON brought forward a very interesting series of cases illustrating the Result of Operations for Pyloric Obstruction. The patients were shown and sections from the growths removed were exhibited by the lantern. 1. A case of recovery after Pyloroplasty for Stricture of the Pylorus. The patient was a woman who was operated on in October, 1894, the case being published in THE LANCET of Feb. 16th, 1895, p. 396. At the time of the operation she was fed entirely by the rectum. She was now in perfect health and could eat anything. He made an incision one and a quarter inches from the pylorus, passed a guide through it, and then made an incision through all the coats, and then sutured the incision so that the line of union was transverse to the incision. Mr. Morison had performed this operation 19 times and all the patients had recovered. Relapses did not occur. 2. Cases of Pylorectomy for Malignant Disease. Case 1. A woman, aged 40 years, who had had severe pain after food for six months and vomiting and emaciation for two months. There was a tumour of the size of an orange which could be felt near the umbilicus and which proved to be a scirrhous mass. Pylorectomy was performed in October, 1897. She could now eat anything, was in good health, weighed one and a half stones more than before the operation, and there was no evidence of recurrence. Case 2. A man, aged 43 years, who had had severe pain after food and emaciation for some time. There was a growth of encephaloid cancer reaching nearly up to the pylorus which was excised with the growth. He was now in good health and had gained 19 lb. in the six months after the operation. Case 3. A woman, aged 40 years, who had had pain and vomiting for a year. There was great dilatation of the stomach due to an adeno-carcinomatous growth of the size of a walnut in the pylorus. She had gained two stones since the operation in September, 1898. Case 4. A man, aged 38 years, who had rapidly emaciated and suffered from pain and vomiting for 10 weeks. There was an extensive colloid carcinoma involving the pyloric half of the stomach which was removed and the cardiac end was joined to the duodenum by a modification of Billroth's method. A chain of glands was affected and had to be removed. The patient was now in excellent health and there were no signs of recurrence. Case 5. A man, aged 41 years, on whom pylorectomy had been performed six weeks ago for a small scirrhous mass. The man was now quite well and had gained more than a stone in weight. The operation was, in Mr. Morison's opinion, safer than gastro-enterostomy and should be performed whenever the tumour was moveable, the size of the tumour not being an important consideration.—Mr. CHARTERS SYMONDS congratulated Mr. Morison on his remarkable results. He had tried the method of pyloroplasty described in one instance with a satisfactory result and when he had to operate on the patient later for some other trouble he found that no adhesions had occurred. In one case of pylorectomy he had found difficulty in joining the duodenum and stomach and he had finally to employ a Murphy's button. The ultimate result was good, the patient being able to return to work. He was inclined to think more favourably of gastro-enterostomy than Mr. Morison appeared to do. He had performed the operation 20 times and had seen nothing but good from it. It had given great relief where removal was impossible.—Mr. W. G. SPENCER also congratulated Mr. Morison on his

splendid results and observed that there seemed to have been unusually little involvement of lymphatic glands in his cases considering the size of the tumours. He thought the end-to-end approximation of the stomach and duodenum as practised by Mr. Morison was better than the method employed in Germany of closing the cut end of both organs and then making a lateral opening between the two. Mr. Spencer had performed pyloroplasty successfully, but he preferred to pass his sutures only through the peritoneal and muscular coats, using a Lembert's suture of fine silk and an ordinary round sewing needle. He thought that gastro-enterostomy was of great service in cases where excision was impracticable.

Dr. RADCLIFFE CROCKER described a case, and showed coloured drawings, of Lymphangeioma Tuberosum Multiplex. The patient was a woman, aged 30 years, who had first noticed the lesions at the age of 18 years. There was a large number of small, smooth, papular elevations on the skin over the upper part of the chest. They were most abundant under the clavicles and without any definite arrangement although there was a tendency for them to follow oblique lines from the shoulders to the sternum. They were confined to the upper part of the chest with the exception of a few outlying papules on the neck and in the axillæ. Some of them were yellowish or brownish but others were of the same colour as the surrounding skin. There was milium between the spots and on some of them. Microscopically they had a cystic structure with some glandular elements. The patient was in robust health and there was no inconvenience from the spots beyond their preventing her from wearing low-necked dresses. The condition was a rare one, only 10 cases having been recorded.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on March 15th, Mr. T. Davies Pryce, President, being in the chair.—Mr. Tresidder showed a patient from whom he had removed the Lower Six Inches of the Rectum by a modification of Kraske's method, dividing the sacrum at the level of the third piece and removing the lower portion of it and the coccyx.—Mr. A. R. Anderson showed a patient after operation for a Perforated Gastric Ulcer. The operation was done about six hours after perforation and recovery was uneventful. The ulcer was situated on the posterior wall of the stomach, near the lesser curvature and close to the œsophageal opening. It was of a size admitting the index finger-tip. The peritoneum was soiled with some milky fluid which must have reached the general cavity through the foramen of Winslow, as the ulcer had perforated into the lesser sac of the peritoneum and was reached after tearing through the small omentum and sutured.—A discussion on Gastric Ulcer, with special reference to the Diagnosis of Perforation, was opened by Mr. R. C. Chicken, Mr. A. R. Anderson, and Dr. Noble. Mr. Chicken remarked upon the great number of symptoms which by one author and another were laid down as occurring in perforation of a gastric ulcer. Regarding the ulcer itself and the diagnosis of it, the three cardinal symptoms were (1) pain, (2) vomiting, and (3) tenderness, although one of these might be absent. In Mr. Chicken's opinion vomiting of blood was nearly always present. In respect of the diagnosis of perforation the chief points were—(1) previous history, with a history of vomiting of blood, especially of the "coffee-grounds" variety; (2) sudden onset; and (3) general abdominal pain.—Mr. A. R. Anderson spoke chiefly in relation to treatment and described two cases. In the first case an operation was performed for perforation and all went well for a time; but subsequently a subphrenic abscess developed which ultimately proved fatal. There had been great soiling of the peritoneum in this case with solid material and the probable cause of the abscess was the lodgment of a portion of this on the upper surface of the liver. The abscess was situated posteriorly at the position of the reflection of the peritoneum on to the diaphragm. Mr. Anderson insisted upon the great importance of cleansing this situation as a routine practice in such cases and remarked that it was often neglected. A second case was related in which a small, round, deep, conical ulcer was excised before closing the perforation. The result was completely successful and in such cases Mr. Anderson advocated excision rather than simply closing the perforation. Referring to the operative treatment of non-perforated ulcers Mr. Anderson remarked on the encouraging results which had been reported by writers, chiefly continental. He considered that in some cases it was the right course to adopt.—Dr. Noble confined his remarks to the diagnosis of perforation and considered that the following were the signs of chief importance: (1) sudden pain; (2) immobility of abdominal walls; (3) rapid distension; (4) resonance replacing liver dulness; (5) friction sounds to be heard with the stethoscope and indicative of commencing peritonitis; (6) previous history of vomiting, bearing in mind that in 50 per cent. there is no history of hæmatemesis obtainable; and (7) the pulse, and to this condition he attached very great importance.—The President spoke, relating a case in which there was no reasonable doubt that a perforation had occurred in the gastric ulcer. Operation was proposed but the patient declined and recovered.—Similar cases were related by Dr. Hunter and Dr. Giddings.—The discussion was continued by Mr. Tresidder, Mr. Blurton, Dr. Mutch, and Dr. Bolton.—The following resolution, which was proposed by Dr. Giddings, and seconded by Mr. Geraty, was carried unanimously: "That in the opinion of this society the National Society for the Prevention of Consumption and other Forms of Tuberculosis is worthy of support and that the formation of a local branch would be advantageous."

BRITISH GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held on March 23rd, the President, Dr. Macnaughton-Jones, being in the chair.—Mr. C. Ryall showed three specimens of Uterine Myoma removed by Abdominal Hysterectomy.—Dr. Winson Ramsay (Bournemouth) showed: (1) Two Uteri removed by Vaginal Hysterectomy; (2) Uterus removed by Panhysterectomy; (3) specimen of Tubal Abortion; and (4) a Modified Broad Ligament Needle.—Dr. James Oliver exhibited a photograph of Fibroid of the Ovary with extensive Localised Extravasation of Blood under the Capsule of the Tumour.—In the discussion on these specimens the President, Dr. F. A. Purcell, Dr. Heywood Smith, Dr. Herbert Snow, Dr. R. H. Hodgson, Dr. Arthur Giles, Mr. Ryall, and Dr. Ramsay took part.—Dr. James Oliver read a paper on a case of Adenoma Universale of the Endometrium in which panhysterectomy by the abdominal route had been performed. A photograph of the interior of the uterus was exhibited and this showed myriads of more or less pedunculated growths varying in size from that of a pea to that of a walnut springing from the mucous membrane of the cervix as well as from the body of the uterus. The patient who was but 34 years of age was a virgin and the symptoms which were referable to the disease had existed for 10 or 12 years. Dr. Oliver did not consider that the disease should be termed, as it had hitherto been, "adenoma malignum." He drew attention to the fact that the lining membrane of the cornua uteri in horned ruminants showed upheavals which resembled closely the more or less polypoid growths which characterised adenoma universale in the human female and he suggested that this disease might be due to a reversion of type.

LIVERPOOL MEDICAL INSTITUTION.—A meeting of this society was held on March 23rd, the President, Dr. Macfie Campbell, being in the chair.—Mr. Banks showed three cases in which he had operated for diseases of the jaws. The first case was that of a middle-aged female who had suffered for three years from an epulis connected with an upper left molar tooth. The growth involved the whole of the left side of the hard palate and alveolar margin. It was removed together with the alveolar process by an incision through the cheek from the angle of the mouth. The cavity left had been fitted with a denture and the speech and mastication of the patient were now perfect. The second case was that of a middle-aged man who had 12 years' history of a growth of the hard palate. Three attempts had been previously made elsewhere to remove it. The operations appeared to have irritated it into a rapid growth doubtfully malignant. The whole of the hard palate and alveolar process of the upper jaw were removed. A plate with teeth had been fitted with perfect result as regarded speech and mastication. The third case was that of a young man, aged 18 years, who had bony ankylosis of the temporo-maxillary articulation following inflammation after the removal of teeth. The right condyle was removed and the left coronoid process and the neck of the left condyle were chiseled through. He now had perfect movement.—Dr. MacLeod Ross read notes of a rapidly fatal case of Acute Spleno-medullary Leukæmia which occurred in a primipara, aged 27 years, a fine well-built woman who had been confined five weeks previously. The case progressed rapidly without any particular complication except persistent diarrhœa and terminated fatally from asthenia 97

hours after being first seen and 25 days after the first symptoms. The main points of interest were: (1) the very acute character of the case; (2) the affection being of the splenomedullary variety and not of the lymphatic (as most cases are); (3) leucocytes being distinctly in excess of red cells, the latter varying much in size and shape; (4) the absence of hæmorrhages, except some suspected retinal extravasations a few hours before death; (5) the fact that vomiting occurred only once; (6) the absence of any marked rise of temperature; and (7) the astounding rapidity with which emaciation occurred (four days), in spite of the satisfactory amount of nourishment taken, sufficing to reduce a really well-nourished woman almost to a condition of skin and bones.—Mr. R. W. Murray read notes of a case of Suppurative Peritonitis treated successfully by incision and careful cleansing. The discussion on this case was adjourned.—Dr. Abram reported two cases of Lympho-sarcoma and showed lantern slides and specimens illustrating the clinical and anatomical features. He drew attention to the conflicting views in vogue concerning lympho-adenoma and lympho-sarcoma, some considering them essentially the same and others that they were essentially different. He agreed rather with the latter view and he considered the specific inflammatory origin of the disease indubitable, although the specific agent had not yet been found. He suggested that in all cases of general glandular enlargement careful microscopical and bacteriological examination of the blood should be made and that excision of a gland should be practised for inoculation experiments. This course was adopted in his cases and led to the diagnosis of lympho-sarcoma being made which was borne out by the rapid course of both cases, death occurring in one case in nine months and in the other in four months.—Dr. Barendt showed a servant girl, 20 years of age, with Leucoderma Colli who had acquired syphilis six months previously. He drew attention to the long duration of this syphilide and the importance of examining the neck in suspected cases of syphilis.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.—A meeting of this society was held on March 9th, Dr. James Murphy being in the chair. The following cases and specimens were shown:—Dr. W. Robinson: A boy, aged 11 years, who for the past six years had complained of Pain and Swelling of the Big Toes and who nine months ago showed great difficulty in walking upstairs. At the present time the pseudo-hypertrophy was limited to the calf muscles and infraspinati, the quadriceps, glutei, deltoids, and chest muscles being wasted.—Dr. Macdonald: A man, aged 44 years, upon whom had been performed eight months ago the operation of Total Excision of the Upper Jaw for antral carcinoma. Two months previously to the operation the patient had two teeth extracted and when seen later fungoid growth was presenting through the sockets. Although the orbital plate had been removed there was no dropping of the eyeball and only very slight deformity.—Dr. James Drummond: Unreduced Fracture and Dislocation of the Elbow in a man, aged 50 years, who had 20 years previously fallen down a ship's hold. Some weeks later he had been admitted into hospital in Philadelphia where several pieces of dead bone came away. Two years later he was able to resume work and he now presented a most remarkable deformity, but he had a very useful elbow with fair range of movement.—Dr. Page: 1. A man, aged 26 years, who four months ago had undergone operation for the extirpation of a Varicose Aneurysm of the Femoral Artery in Hunter's canal. A portion of both artery and vein was removed. Details of the case had been reported at the December meeting last year. 2. A woman upon whom he had recently operated for Gall-stones. Several stones were removed from a contracted gall-bladder and one large stone in the cystic duct could only be removed after extending the gall-bladder incision along the cystic duct to the site of the stone. The gall-bladder was accurately sutured and the abdominal wound was closed without drainage. 3. Removal of Malignant Growth in the Neck together with the Pneumogastric Nerve. This patient two years previously had his tongue removed for epithelioma and nineteen months later he returned with recurrence in the cervical glands. At the operation for their removal a portion of the pneumogastric nerve was excised without bad effect. 4. Sarcoma of the Meninges. This patient, aged 57 years, three years ago received a severe blow on the top of the head resulting apparently in fracture of the base of the skull. Nine months ago a soft point over the vertex was discovered into which a finger might be inserted. A swelling gradually appeared under the scalp without signs of intracranial pressure. A fortnight ago an exploratory incision revealed a very vascular growth springing from the meninges and presenting through a distinct orifice in the cranial vault.—Dr. David Drummond: 1. Three patients with Musical Heart Murmurs. In discussing their time in the cardiac cycle, contrary to general statement, his experience went to show that such murmurs were far more frequently regurgitant than direct. In reviewing their pathological import he was of opinion that they indicated good compensation, and as compensation failed the musical character of these murmurs disappeared. 2. A specimen of an Aneurysm of the Aorta which had ruptured into the superior vena cava. The patient had been shown at a previous meeting of the society as suffering from the above condition and the specimen exhibited proved the correctness of the diagnosis.—Dr. J. V. W. Rutherford: A specimen of a Uterine Fibroid with a Broad Ligament Cyst.—Dr. Cottew Moore: A card specimen showing Congenital Pigmentation of the Retina.

ÆSCULAPIAN SOCIETY OF LONDON.—A meeting of this society was held on March 24th, the President, Mr. D. H. Goodsall, being in the chair.—Mr. F. Hewitt Oliver showed a well-grown young woman whose Left Forearm had been Amputated in Utero. At birth the stump was unhealed and "the bone was bare and discharging." There was a length of five centimetres of forearm and in it was no radius.—Mr. E. C. Hearne showed a man, aged 50 years, previously in good health, the subject of Acanthosis Nigricans of six months' standing. The spines were scattered over the skin as a whole, luxuriating in the axillæ, and around the anus forming thick masses extending externally five centimetres; the hard palate and buccal mucous membrane were in part affected similarly; the soles were blue and horny and the nipples were much affected by the horny coloured skin growth. Thyroid treatment only reduced the general health of the patient.—A deputation of the proposed Central Hospital Board for London attended to ascertain the members' views. In the course of Sir Arthur Clay's speech he said that in 1897 1,500,000 out-patients attended the London hospitals, which translated was that 25 per cent. of the people of London paid nothing or ridiculously little for medical treatment. This should mean that this percentage of her population was destitute, which was obviously untrue. Hence money which should come to the general practitioner did not come. Inquiry at the hospitals could not be effectual to check abuse, hence the need for some other system.—Mr. Loch, the honorary secretary of the Charity Organisation Society, put the question, Was it good or bad that "outs" should attend as now, paying little or nothing, and did the present system of crowding to the out-departments financially injure general practitioners? He advised that in the new scheme members of friendly societies should have a first claim on the out-department and that trained women should be employed to find out the money position and deserts of applicants. He wished to prevent by every means pauperising and pauperism and to relieve the needy permanently if need be.—Colonel Montefiore put the question, Did the existing state of the out-departments tend to lower the status of the general practitioner by the low charge made at hospitals, when any, thereby tempting some of the number to make debased charges?—All the members present agreed that there was abuse of the out-patient department and sympathised with the views and efforts of this proposed board.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held at Sheffield on March 17th, the President, Dr. Donald, being in the chair.—Dr. Keeling showed the following specimens: (1) Large Cystic Myoma of the Uterus; (2) Dermoid Cysts of both Ovaries; and (3) Tubo-ovarian Cyst, an Ovarian Hydrocele.—Dr. Favell related a case of Cancer of the Cervix associated with Three Months Pregnancy. The uterus and its contents were successfully removed by vaginal hysterectomy.—The President reported a case in which he had performed Vaginal Hysterectomy for Post-partum Hæmorrhage. The patient, a primipara, was observed during pregnancy to have an extremely thin uterine wall. Labour came on spontaneously, accompanied, however, by extreme inertia and was completed by forceps. Profuse and intractable post-partum hæmorrhage ensued, continuing in

spite of all the usual methods of treatment, including plugging with gauze. The patient was apparently moribund when seen, but it was decided to perform vaginal hysterectomy as a last resort. The operation was easily carried out, not occupying more than ten minutes, clamps being used for the broad ligaments. The patient temporarily improved but died an hour later. The President was of opinion that if the operation had been performed a few minutes earlier the patient's life would probably have been saved.—Dr. W. K. Walls introduced for discussion the subject of the Treatment of Some Cases of Accidental Hæmorrhage, adjourned from the last meeting. In these cases Dr. Walls advised that the membranes should not be ruptured until the cervix was fully dilated or dilateable. There was no objection to plugging the vagina, especially if used in combination with a hydrostatic dilator such as De Ribes's bag. After delivery by forceps or version the great risk to the patient was from the almost inevitable post-partum hæmorrhage. If the usual methods, such as ergotin, kneading, compression, and gauze-packing, failed he advised vaginal hysterectomy. The operation could be rapidly carried out and he believed that in this way certain cases could be saved.—Dr. Glynn Whittle in an experience of 10,000 labours had met with severe accidental hæmorrhage in 16 cases. All the infants died with one exception, but 15 of the mothers recovered. He had never used hydrostatic dilators but preferred to plug the cervix and vagina firmly and to follow this by manual dilatation of the os uteri, effecting delivery by forceps or version. The post-partum hæmorrhage was in his experience always controlled by a very hot uterine douche. He was not in favour of vaginal hysterectomy or Porro's operation in such cases, believing that if a woman could survive these procedures she would certainly be saved by a vigorous application of the above principles of treatment.—Dr. J. W. Martin considered that the cases of very severe accidental hæmorrhage as described by Dr. Walls must be of very great rarity, but in such cases he agreed that vaginal extirpation was justifiable if all other methods failed to check the post-partum bleeding.—Dr. Lea suggested that in cases of severe internal bleeding into the uterus associated with an undilated os and extreme inertia *accouchement forcé* by free incisions into the cervix should be carried out.—Remarks were also made by Dr. Briggs, Dr. Keeling, and the President and Dr. Walls replied.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—An ordinary meeting of this society was held at 20, Hanover-square, on March 22nd, the President, Dr. Radcliffe Crocker, being in the chair.—Dr. T. D. Savill showed a case for diagnosis, a female with an Eruption which he believed to be Lichen Ruber Planus. A well-marked bulla was observed at one spot; she had been taking arsenic.—Dr. J. H. Stowers showed a case of Sclerodermia in a young woman. There were symmetrical morphœic patches on both arms, both legs, and on the fronts of both thighs. In the discussion it was authoritatively stated that up to the present no structural nerve changes had been observed in these cases either in the central or any other parts of the cord or in the peripheral nerves.—Dr. A. Eddowes showed a case of Generalised Lichen Ruber Planus in a boy aged six years.—Dr. Abraham showed two cases of Dermatitis Herpetiformis in men. One patient was about 70 years of age. He also showed two members of one family, a boy and a girl, with Erythema of the Extremities. In the girl both legs and both feet were affected (? Bazin's legs); in the boy the nose was the only part affected.—Dr. Travers-Smith showed a case of Lupus Erythematosus (?) in a female, aged 23 years. One cheek, both ears, and the fingers were affected.—The cases were discussed by the President, Dr. Abraham, Dr. Eddowes, Dr. Galloway, Dr. Savill, Dr. Phillips-Conn, Dr. Rufenacht Walters, Dr. Travers-Smith, Mr. Pernet, and Dr. Stowers.

BRISTOL EYE HOSPITAL.—The 88th annual meeting of the friends of this institution was held on March 22nd under the presidency of the High Sheriff (Mr. C. Wills). The report showed that 5282 new cases had been treated during 1898; 421 cases had been admitted, being an increase of 28 as compared with 1897. The number of out-patients exceeded that of any previous year. The financial statement showed a deficiency on the year of £228. It was decided to add an extra storey to the building which will permit of the erection of a new operation theatre, together with increased accommodation for in-patients and for the resident staff. The cost is estimated at about £4500.

Reviews and Notices of Books.

The Penycuik Experiments. By J. C. EWART, F.R.S. London: Adam and Charles Black. 1899. Pp. xciii., 177. Price 10*s*.

THE account of Professor Ewart's experiments set forth in the present volume should prove of interest to more than one class of readers. The whole question of hybridity and the mysterious phenomena of telegony (as some think them) are of the greatest importance to the zoologist, while both the breeder and the veterinarian cannot fail to glean much of moment to their own occupations from what Professor Ewart has to say. It is with the purely scientific aspect of Professor Ewart's investigations that we shall deal in the present notice of his book. The book is pervaded by the question of telegony; not in the least that the author has adduced any reasons—any further reasons—for accepting this view of some phenomena of hybridism, but because, in his opinion, some of those alleged phenomena are to be explained in quite a different fashion—in fact, by reversion to an ancestral form. Telegony itself seems to date practically from the notorious rather than famous experiment of Lord Morton and the author deplores the "damnable iteration" with which this distinctly dubious experiment has been offered to the scientific public. In spite of the frequency with which this experiment has been quoted it will perhaps make matters clearer if we give the briefest account of what it was, for the statement will prove a convenient text whereon to build up some account of Professor Ewart's own contributions to the matter. In 1820 Lord Morton wrote a letter to the President of the Royal Society (which is given *in extenso* by the author of the volume before us) in which he detailed some experiences with a mare of which the gist is this: a male quagga was put to a seven-eighths Arabian mare and a hybrid of intermediate characters was produced. The mare was then mated by another owner with a black Arabian horse; the offspring in this case had a "striking resemblance to the quagga." Now the occurrence of actual genuine telegony is conceivable for two principal reasons, of which the last to be mentioned is better because more intelligible than the first. This first is the somewhat mystical view held by several naturalists that the sperm of the previous sire penetrating, it is to be supposed, as far as the ovary modifies profoundly the female sexual cells. This is, of course, sheer hypothesis; criticism of the assumption is far easier than to support it in any way. The second view is perhaps the actual living of the spermatozoa for a long period in the female passage which then, by virtue of prepotency, fertilises an ovum in preference to the sperm of a second sire. The facts well known to occur in many hymenopterous insects are an argument in favour of this way of regarding the matter. The females of many of these are fertilised in the summer or autumn; the sperm is stored up in receptacles where it lives through the winter to come into contact with an ovum the following spring. A far better way out of the difficulty raised by the facts of hybridisation is, however, the view urged by many, including Professor Ewart. For them there is no such thing as telegony: the phenomena appearing to be of that nature are really due to ancestral traits arising in the offspring. "When I first saw Agasse's drawing of the quagga-hybrid (of Lord Morton)," observes Professor Ewart, "I was surprised at the meagreness of the striping. In all my hybrids there are more stripes than in their zebra sire. ..... I have had in my possession horses with more stripes than are represented by Agasse in Lord Morton's quagga-hybrid and hence it would be difficult to prove that this hybrid was not indebted to its ancestors on the female side of the house for all the stripes it possessed." The occa-

sional occurrence of stripes on pure-bred horses has been often noted. The author himself brings forward a striking instance of a Norwegian pony which showed many face stripes and which "never had the opportunity of even seeing a zebra." So incidentally the Mrs. Betsy Prig-like stories of prenatal influence on the mother are at least not always demonstrable. Further than this, some of the examples which have been collected as to striping in horses show a likeness not merely to zebras in the rough—that is, to a striped equine animal—but to the mountain zebra in particular.

In genuine zebra-horse or zebra-donkey hybrids it is not clear that the stripes are absolutely traceable to the striped parent. Reversion is here too apparent, and in any case "the most zebra-like in form are utterly unlike their sires in their markings." It is well known that in hybridisation between many and varied kinds of animals the same phenomenon is met with. Indeed, the greater mixture of tendencies which would be obtained by the crossing of two species is obviously greater than that which would result from the pairing of two individuals of the same species. Hence the greater probability of the discovery in the offspring of some ancestral trait. Unfortunately hybridisation is very limited in its range or some hint of the common ancestors of now remote groups might be arrived at from such experiments. Professor Ewart has rendered a very great service to the advance of our knowledge of the interesting problems here only too briefly alluded to. It is much to be hoped that he will continue with equal energy this exceedingly important line of research. We may remark, in conclusion, that the facts put forward are illustrated by copious and clear illustrations and that the style is eminently pleasant and intelligible.

The Effects of the Factory System. By ALLEN CLARKE. London: Grant Richards. 1899. Pp. 178. Price 2*s.* 6*d.*

THE volume before us brings under consideration in realistic form the conditions of daily life existing among factory operatives, especially in Lancashire, with which the author is well acquainted from having taught in a public elementary school in a cotton town. Such an account as is here afforded and the vivid pictures drawn from the life by one who has lived and worked among the people demands respect and makes us reconsider the cost of the factory system to humanity. The book is opportune when an Education Bill is before Parliament containing a clause on the special item as to half-time workers among children of school age. Probably there is more general agreement of opinion among the public as to abolishing the half-timers' factory certificate for children under 13 years and raising the age of school exemption to 14 years than upon the other changes which the author would like to see introduced. It is a well-established principle that while the body and brain are rapidly developing it is necessary to the full evolution of manhood and womanhood that the environment should be favourable to physical and mental growth; the child should be childlike, his spontaneity of brain action needs to be trained and not crushed by the monotony and drudgery of labour if he is to gain full power and avoid being dwarfed in his riper years. Low wages, augmented by the child labour of our future operatives, do not promise well for future intelligent work in any industry, and it seems that much of the cotton spinning formerly carried on in Lancashire is now leaving the country; according to the figures quoted the export of cotton goods is declining, while in 1896 manufactured materials to the value of £1,040,748 were imported. These facts suggest that improved skill might be remunerative and compensate the loss of child labour. This question involves the interests of many for the number of half-time scholars on the register in 1892 amounted to 172,363 for England and Wales. Sir John Gorst pointed out to a deputation at the Education Department who urged raising the school age and the abolition of half-time exemptions with limitations of child labour in other directions, that though such action is undoubtedly desirable and to the public interest, yet it is necessary first to win the opinion and acquiescence of the operatives themselves who in too many cases, it may be feared, desire to gain money by the labour of their wives and children rather than seek their real well-being with the accompaniments of a well-ordered home and thriving, well-trained children. Demonstration is the best teaching; an inquiry as to the physical and mental status of children seen individually in selected schools with their subsequent classification under age and sex as "full scholars" and "half-timers" would afford accurate demonstration of the differences between them tending to convince both the public generally and the operatives, as well as indicate the loss and profit of child labour. Northern factory workers are not an unintelligent set of men, and with the facts before them they might be ready to make a just demand for the true interests of their wives and children and their class. Besides questions concerning factory children and their education the book deals with inspection and the social surroundings under which labour is carried on; it is to be wished that the author had been able to make practical suggestions for reform. Much might be done in our manufacturing towns by the improvement of artisans' dwellings and the means of transit, while the smoke nuisance question remains to be solved.

LIBRARY TABLE.

Poison Romance and Poison Mysteries. By C. J. S. THOMPSON. London: The Scientific Press, Ltd. 1899. Pp. 255. Price 6*s.*—This work is written in a popular style and makes no pretence of being a scientific manual. Mystery and crime have a peculiar attraction for some people—that is to say, in theory—and therefore they read with avidity any book which treats of these subjects, be it history or fiction. Mr. Thompson's book deals with poisoning solely from a historical point of view, relating cases which have actually occurred from the earliest times until the present. The first five chapters refer to the poisons of antiquity, royal and historic poisoners, and professional poisoners. Brief reference only is made to the methods employed by poisoners during mediæval times and we think that Mr. Thompson has rather lost an opportunity in not enlarging on this theme. In relating the more modern famous cases of poisoning, however, the author has succeeded in collecting together much that is interesting, although the subject matter naturally deals with the sordid side of humanity and reveals characters calling forth the greatest aversion. Arsenic has perhaps been more frequently used than any other poison for criminal purposes and it naturally receives a large amount of attention from Mr. Thompson. The strange case of Madame Lafarge, the case of Madeline Smith, and that of Mrs. Maybrick are duly detailed. The chapter in which aconite is referred to is chiefly interesting from an historical point of view, although of course the Lamson case is described. Antimony again has been used as a poison in many notable cases and the "Bravo Mystery" and the case of Dr. Pritchard are chosen as examples. The main point of the chapter on Strychnine Poisoning is occupied by the Palmer case, only a very brief account being given of the case of Neill Cream and that of Horsford. This is to be regretted as every medico-legal text-book contains a full account of the murder of Cook by Palmer, whilst the other two cases mentioned are of a more recent date and would have made the book now under consideration more valuable for reference. As we have remarked, however, this is not a purely

professional work and does not require the same amount of criticism. The facts are simply given and the gruesome and unnecessary details are omitted.

Professor Hieronimus: A Novel by Amalie Skramm. Translated from the Danish by ALICE STRONACHI and G. B. JACOBI. London: John Lane. 1899. Price 6*s.*—It has hitherto been the boast of the people of these islands that they owed most of their grit and powers of endurance to the strain of Scandinavian blood brought in by successive invasions of Danes and Normans. If, however, the modern Scandinavian and Danish peoples are of the type depicted by Ibsen and the author of this book—and we cannot believe that such is the case—they must have sadly degenerated. Hedda Gabler, Nora, Mrs. Solness, and the lady who so delicately reproved her husband for not taking what she euphemistically called "champagne" when she offered him the chance are a sad descent from the people of the Sagas. "Professor Hieronimus" is the story of a lunatic asylum, to which place, in Denmark apparently, a husband can consign his wife "as soon as he and a doctor say that she is mad." The sign of madness in the wife in this story seems to have been that she came to the conclusion that she could not paint pictures. Were this form of madness more common the exhibitions at picture galleries would be less painful. Her husband consulted with a medical man who was a weak creature and they agreed that she must go into an asylum for rest. She went of her own free will and the main portion of the book is taken up in describing her experiences there. Danish asylums for rest must be curious places. Acute and chronic cases are all mixed up together and although the patients have separate rooms the doors are never allowed to be shut. This, naturally, rather tried the lady—her name was Else—who came to the establishment for rest, for this was the sort of thing which happened. "Soon after a creature in a chemise and a short night-jacket, with knees bent almost in a sitting posture, came with unnaturally long strides, violently waving her arms, and darted past the door. ..... Fru Syverts in the next cell began shrieking and hammering on the door. ....." Else's chief sorrow was that they took away her garters, fearing apparently that she would follow the example of the bereaved lady in the ballad—

> "A captain bold of Halifax who lived in country quarters
> Seduced a maid who hanged herself one morning in her garters.
> Oh, Miss Bailey, unfortunate Miss Bailey."

They supplied Else's wants with a piece of string, but one blissful morning she got her garters back and Hieronimus came in. "'Well, now you have got your garters,' he began in a low, soothing tone. 'Do you want them back?' Else answered in cutting tones. 'N–o,' said Hieronimus, with a deprecatory wave of the hand. ....." Finally Else was removed from this asylum to another and there the book ends. Seriously we do not think that lunacy or, for the matter of that, any other form of disease is a fit subject for fiction, and with reference to the behaviour of the husband and the doctor, as Hedda Gabler in one of her sane moments remarked, "People don't do such things."

Marshall and Hurst's Practical Zoology. Fifth edition. Revised by F. W. GAMBLE, M.Sc. London: Smith, Elder, and Co. Crown 8vo. 1899. 10*s.* 6*d.*—A new edition of this well-known and widely read text-book does not need much comment; that it still retains its popularity is shown by the publication of five editions since 1886. Mr. Gamble has, however, still further contributed to the usefulness of the work by re-arranging the order of the chapters on technique, adding where necessary with a hand showing the experience of the practical teacher. This is specially noticeable in the chapters on the Methods of Killing Animals, on the Use of Hardening and Staining Reagents, and in the directions for mounting sections cut in paraffin. A short chapter is now devoted to Drawing with the Camera Lucida. A more correct account also is given of the cranial nerves of the dogfish. Mr. Gamble describes a buccal branch of the seventh or facial nerve, which is given off from the main stem on entering the orbit together with the palatine and hyoidean branches, and in his treatment of these nerves small additions are made here and there which considerably simplify their relative positions. We commend the changes to which we have alluded.

JOURNALS.

The Journal of Physiology. Edited by MICHAEL FOSTER, M.D., F.R.S., and J. N. LANGLEY, Sc.D., F.R.S. Vol. xxiv., No. 1. March 22nd, 1899. London: J. Clay and Sons. Price 6*s.*—The articles contained in this number are: 1. C. A. MacMunn, M.D. Dub.: The Pigments of Aplysia Punctata (with two plates). The pigment named "aplysiopurpurin" is extremely unstable and appears to vary with the species. 2. Wakelin Barratt, M.D. Lond.: Further Observations on the Elimination of Water and Carbon Dioxide by the Skin. Dr. Barratt shows that the elimination of water by the skin is reduced in quantity to about 78 per cent. of the normal output but is not abolished by varnishing it. In dry inflammation a similar reduction to about half the normal output occurs, the diminution in both cases being due to a mechanical blocking of the sweat-ducts. The elimination of carbon dioxide is essentially a single process—viz., that of diffusion through the horny epidermis. 3. J. Lorrain Smith, M.D. Edin.: The Pathological Effects due to Increase of Oxygen Tension in the Air Breathed. These researches are of much interest to all those who employ workmen in laying the foundations of bridges or in other underground work where they are exposed to great pressure. At the pressure of four atmospheres the limit of the toxic action of oxygen is nearly approximated. The experiments of Dr. Lorrain Smith have also a bearing on the general pathology of inflammation since they show that an inflammatory condition of the lungs is in a sense directly continuous with the normal process of respiration. 4. Noel Paton, M.D. Edin.: Some Observations on the Mode of Conversion of Glycogen to Glucose in the Liver. 5. W. Hale White, M.D. Lond., and F. Gowland Hopkins, M.D. Lond.: On the Excretion of Phosphorus and Nitrogen in Leucæmia. 6. W. Edgecombe, M.D. Lond., and W. Bain, M.D. Durh.: An Abstract of Observations on the Effect of Baths, Massage, and Exercise on the Blood-pressure. They show that cold-water baths raise arterial pressure and lower venous pressure. After reaction the opposite obtains. Percussion added to cold aids the rise in arterial pressure. Hot immersion baths lower arterial and absolutely and relatively venous pressure. Saline warm baths lower arterial pressure to a greater extent than pure water baths at the same temperature, and venous pressure, though absolutely lowered, is relatively raised. These effects are more marked if the water be, as at Nauheim, effervescent. 7. P. Botazzi, M.D. Florence, and O. F. F. Grünbaum, D.Sc. Lond.: On Plain Muscle (with 20 figures in the text)—an interesting research giving the tracings obtained from unstriated muscle derived from various sources. 8. J. L. Bunch, M.D. Lond.: On the Vaso-motor Nerves of the Small Intestine (with 26 figures in the text). The author shows the effects of stimulation of various nerves and the influence of several drugs, as nicotine, ergotin, croton oil, coniin, piperidine, and eserine.

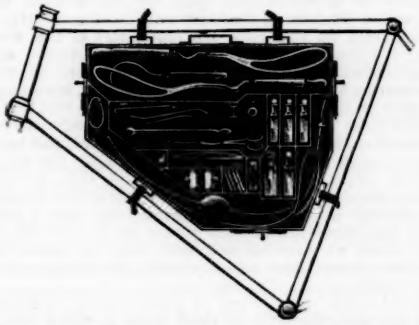
Yale Medical Journal. Vol. v., No. 4. February, 1899.—This number contains two well-written articles. The first is an Address on the Progress of Neurology delivered before the Yale Medical Alumni Association by Llewellyn F. Barker,

M.B., of Toronto, which gives an excellent *résumé* of the work done in this department of medicine during the last few years; and the second is an article by Henry L. Swain of New Haven, Connecticut, on the Detection of Foreign Bodies within the Eyeball, showing that much may be done to determine the presence of a foreign body in the eye by a careful observer without the employment of the x rays.

New Inventions.

AN ASEPTIC OBSTETRIC CASE.

THIS case has been constructed by Messrs. Reynolds and Branson, Limited, of Leeds, at the suggestion of Mr. Herbert Rowe, M.R.C.S. Eng. It is made throughout of block tin; it is unlined and as far as possible the corners inside have been rounded off to increase the ease with which the interior may be cleaned. The instruments, &c., are held in position by metal partitions and clips and (if the bottles are removed) the case with its contents *in situ* may be boiled or sterilised in any other convenient way. Its shallowness (one and seven-sixteenths of an inch) and general shape allow it to be carried on a bicycle but it is equally conveniently carried in the hand. Its outward form can, however, be made



to suit individual ideas; but it is suggested, for ease of cleaning, that the depth should not be materially increased. The list of instruments which it contains can be added to or diminished according to requirements. The case illustrated contains five bottles and 14 instruments (including full-sized forceps and a transfusion apparatus).

VACCINATION APPLIANCES.

THE "Vaccination Set" manufactured by Messrs. Brady and Martin of Newcastle-on-Tyne is a complete collection of requisites neatly packed in a small mahogany box measuring six and a half inches by two and five-eighth inches by two and a half inches. It consists of (*a*) a lamp and boiler for sterilisation; (*b*) two steel vaccinators; (*c*) three glass tubes, numbered, for holding tubes of lymph; (*d*) blower for ejecting the lymph; (*e*) glass plate; and (*f*) one tube of carbonate of soda tablets and one tube of perchloride of mercury tablets. The blower is an indiarubber ball, about an inch in diameter, connected with the tube of lymph by means of a very slender indiarubber tube. The boiler is a nickled metal cylinder three and a half inches high and one and three quarter inches in diameter. Each of the vaccinators is three inches long, sharpened and pointed at both ends, a state of matters requiring great care on the part of the operator lest he wound his own fingers with the end not in use. It would also be easy to pack the vaccinators somewhat differently in the box so as to give better protection to their points. For sterilisation they are hung on wires in the boiler. Practitioners will find this vaccination set decidedly convenient.

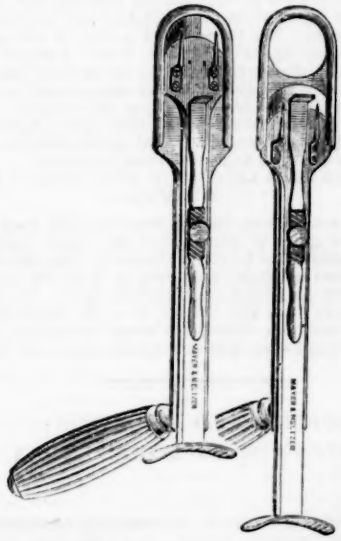
IMPROVED ASEPTIC TABLE.

THE accompanying illustration shows a new registered aseptic table, specially designed to take the small cabinets which were introduced by Messrs. Arnold and Sons last year. It can also be used as a ward- or instrument-table if desired.

It is very cheap and is made of iron enamelled white in two sizes, 20 in. by 14 in. and 18 in. by 11½ in. The manufacturers are Messrs. Arnold and Sons of West Smithfield, E.C.

A NEW TONSIL GUILLOTINE.

THE advantages of this tonsil guillotine are the following. 1. The two prongs attached to the back of the knife-blade transfix the tonsil and prevent its falling into the pharynx, a matter especially important when the patient is under an



anæsthetic. 2. Owing to the centre-piece of steel which helps to keep the blade on the slide, having its forward end turned up at right angles the act of drawing back the blade for excision of the second tonsil ejects the first from the

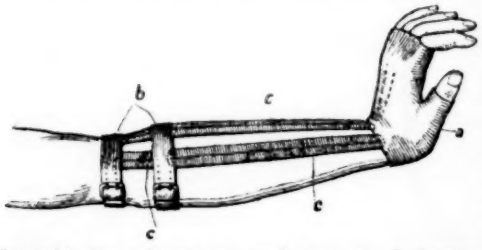
instrument, thus obviating the necessity of disengaging it with the fingers and thereby losing time. I have used the instrument in my hospital work and have found it answer very well. It has been made for me by Messrs. Mayer and Meltzer.

F. W. FOXCROFT, M.D. Edin.

Birmingham.

APPARATUS FOR THE RELIEF OF WRIST-DROP.

A MAN, aged 36 years, a worker in metallic lead, came under my care 18 months ago suffering from acute pain down the left arm and forearm with inability to extend the fingers and wrist. At the end of a fortnight the reaction of degeneration appeared and at the end of six weeks, during which time he was treated daily with the galvanic current and massage, there was marked wasting of the affected muscles and no restoration of power. He was then treated for some weeks at St. Mary's Hospital and afterwards at the London Hospital, but without relief. The flexors of the forearm were unimpaired so that, given extension of



the wrist, the grip was as good as ever. I therefore determined to substitute the action of elastic bands for that of the now useless muscles. The apparatus used (vide illustration) consisted of a broad buckled leather strap (*b*) encircling the arm just above the olecranon. From this two broad elastic bands (*c*) extended to another similar encircling strap (*b*) immediately below the elbow-joint. From this second strap two elastic bands (*c*) passed down the extensor surface to be inserted at the level of the heads of the metacarpal bones into the posterior aspect of a strong leather glove (*a*) which reached only to the ends of the first phalanges. This contrivance (which was admirably made by Messrs. Moody Bell of Cheltenham) acted so satisfactorily that the man forthwith resumed his previous work and has now continued it for eight months. For future use I should be inclined to add an "annular ligament" at the wrist. I should also substitute round elastic cords for the bands down the forearm and instead of the glove a padded strap round the hand at the level of the metacarpo-phalangeal articulation.

In the above-mentioned case the splint figured in "Erichsen's Surgery" was tried, but its interference with flexion of the wrist and fingers rendered it useless.

W. LAWRENCE LISTON, M.D. Brux., M.R.C.S. Eng.,
Tewkesbury. L.R.C.P. Lond.

[A similar contrivance, having somewhat the form of a long fingerless glove or mitten, with four elastic cords on the back adjustable for length, is figured at page 256 of the large illustrated catalogue published by M. Collin (maison Charrière), Rue de l'École de Médecine, Paris. Of course, this coincidence does not detract from the originality of Dr. Liston's ingenious device, the straps above and below the elbow distinguishing it from the apparatus of the French maker.—ED. L.]

QUACKS AND ABORTION:

A CRITICAL AND ANALYTICAL INQUIRY.

IX.[1]

WE have received copies of an interesting correspondence which passed recently between the editor of an old-established provincial newspaper (the *Ormskirk Advertiser*) and an advertisement agent in consequence of the editor having flatly refused to insert an advertisement of the man Davis (of whom he had read in our article published on Dec. 31st, 1898) and returned his cheque. The advertisement agent, whose knowledge as to the facts and figures of which he writes we do not for a moment dispute, while we question his inferences, makes the following statement: "I would point out that my client's business is a perfectly legitimate one, his pills being stocked by all the leading wholesale houses, and further, his advertisements appear in some 3,000,000 chemists' price-lists published annually throughout the country. Under these circumstances you really cannot class my client's business with those about whom so much has justly been heard of late." Not wishing to rely on the agent's opinion as to the class of business done by his client the editor thereupon wrote to Davis for a box of pills and received that which we also obtained in the same way. The printed leaflet to which we called attention accompanied them, with its advertisements of a mixture for obstinate cases, a Positive Preventive Injection, and a book on "How to Limit your Family and Woman Her Complaints," while the same note emphasised the suggestion of the powers of the pills to cure "irregularities"—namely: "These pills must not be taken by those expecting to become mothers." We congratulate the *Ormskirk Advertiser* on the stand taken by it and we feel sure that it will have earned thereby the respect of all its respectable subscribers.

Curiously enough, a few days ago a case was tried in the City of London Court in which the converse of Owen *v.* Greenberg[2] was decided. In that case, it will be remembered, the action, which failed, was in part to recover the price of advertisements paid by the Irristum Company which *Pick-me-up* had refused to insert. In the one to which we now refer the proprietors of the *Weekly Dispatch* claimed £4 10*s.* from an advertisement agent for advertisements which had been inserted by them. After hearing the evidence Mr. Registrar Wild, according to the report of the case in the *Daily Chronicle*, said that the plaintiffs must have known that it was a filthy advertisement and therefore the contract could not be enforced, and he proceeded to give judgment for the defendants. He did not, however, award costs to the successful side, no doubt marking thereby his view that the nature of the advertisement, though it rendered the contract void, was a matter within the knowledge of both parties to it. We can only repeat what we have already said—that no paper need continue to insert these advertisements on the ground that it can legally be compelled to do so.

We add a few more names of papers which continue to insert the advertisements of those firms of which we have written in these articles or which from their advertisements of cures for irregularities and obstructions appear to carry on a similar trade and are clearly liable to be applied to by pregnant women anxious to bring about miscarriages. We do not pretend that our list has been an exhaustive one, but as far as the resources at our command have enabled us and with the help of numerous well-wishers who have sent us copies of country papers we claim to have made it long enough to show that the evil is still a considerable one and worthy of the attention of those whose duty it is to protect the public.

One of these papers, the *Grimsby Times*, prints no less than six advertisements of the class of which we have written in one of its columns combined with others offering "a boon to weak men" and "priceless information for married ladies." We cannot congratulate the *Grimsby Times* or its readers.

LIST OF PAPERS.

Auckland Chronicle.
Blackpool Times (Blanchard).
Bury Guardian.
Derby Express.
Dudley Herald (Blanchard).
East Essex and Halstead Times.
Flint County Herald.
Gloucester Journal.
Grimsby Times (Martin).
Great Thoughts.
Isle of Wight Express.
Lincoln Gazette.
Lynn News (Blanchard).
Pembroke County Guardian (Blanchard).
Tring Gazette (Blanchard).
Watford Post.

[1] Articles I., II., III., IV., V., VI., VII., and VIII. were published in THE LANCET of Dec. 10th, 17th, 24th, and 31st, 1898, and Jan. 21st, Feb. 4th, March 11th, and March 25th, 1899, respectively.

[2] See article in THE LANCET, Dec. 24th, 1898.

THE Council of Charing-cross Hospital has appointed Mr. A. Saxon Snell, F.R.I.B.A., architect in connexion with the proposed re-arrangement and extension of the hospital.

THE LANCET.

LONDON: SATURDAY, APRIL 1, 1899.

THE resignation of the honorary medical and surgical staff of the *Dreadnought* Seamen's Hospital at Greenwich affords a remarkable illustration of the results of the mismanagement of the affairs of a hospital which must occur sooner or later when it is solely under the control of a lay committee and when there are no members of the medical or surgical staff (consulting or visiting) on the committee. The visiting staff which does the work of the hospital and supervises the well-being of the patients is kept in ignorance of important matters of policy and even of points of detail with regard to which it is of the utmost value to the proper administration of the hospital that it should be at once informed and should be able to express its opinion. With a medical staff represented on a committee it would be impossible for that committee to initiate and carry out such a discourteous line of conduct as that which the present committee of management of the *Dreadnought* Seamen's Hospital has thought fit to adopt towards its visiting staff. The facts have been fully published and commented on in THE LANCET and in other papers and will be quite familiar to our readers. We need therefore now only summarise the chief features which have been brought out in the controversy.

A scheme for the establishment of a school of medicine for tropical diseases was suggested by Mr. CHAMBERLAIN and was under consideration by the hospital committee for some considerable time, and although the physician to the Branch Hospital (who is also the medical adviser to the Colonial Office but a junior in standing) was consulted, the members of the senior visiting staff of the *Dreadnought* were never, individually or collectively, asked for their opinion. The committee do not see that there is any "want of courtesy" in this procedure. We think that the medical profession will hold a very different opinion from that entertained by the committee. On July 11th of last year Sir HENRY BURDETT published a letter in the *Times* giving the details of a fully-matured scheme for the new school and the extension of the Branch Hospital, and appealing for public support; his letter contained the statement that "the teaching staff will consist of the senior medical staff of the *Dreadnought* Hospital at Greenwich," &c., whereas that staff did not know that any such scheme was even being contemplated. Sir H. BURDETT subsequently said that his letter was written under instructions from the committee of the *Dreadnought* Hospital, so that he repudiates any personal responsibility for the statement. The visiting staff wrote to the *Times* to point out that this statement was made without their authority or consent. A long and somewhat bitter correspondence then ensued, inasmuch as no apology or expression of regret was forthcoming from the committee for its lack of courtesy in not consulting the visiting staff. We understand that no apology has even yet been offered to the staff. A memorandum full of controversial and incomplete statements, which was published in a contemporary in December last and which should evidently have been sent to the visiting staff, merely intensifies the lack of courtesy. The staff therefore could do nothing but resign, as it was impossible for them any longer to carry on the work of the hospital under such circumstances. Moreover, the value of the appointment has been seriously diminished. Cases from the Victoria and Albert Docks are to be concentrated at the Branch Hospital and not to be conveyed across the river as in the days when the Branch Hospital was founded, and so the parent hospital is to be largely deprived of its historic cases and turned into a sailors' infirmary or asylum.

The judgment of the heads of the profession on the conduct of the committee of management is on record. Sir WILLIAM BROADBENT, in a letter published in the *Times* of Dec. 7th, sums up his objections to a memorandum and appeal for public monetary support, which were sent to him by the committee of management, in the following forcible paragraph: "A committee capable of such a suppression of truth material to the issues and of such a suggestion of what is calculated to mislead is, in my opinion, totally unworthy of confidence." The Royal College of Physicians of London has twice refused to take part in the carrying out of the scheme notwithstanding the appeals of the committee of management who plaintively plead, when they give no answer to the questions asked by the visiting staff, that they object to being so catechised. The Royal College of Surgeons of England has withdrawn its representative. A school of tropical medicine, or even more than one, will be of great advantage to Englishmen who intend to practise abroad, but it is much to be regretted that this one is started on a narrow and personal basis instead of being founded on lines approved by the official bodies representing the profession and thus securing their hearty coöperation and support. Moreover, we are sorry to see that the students of the Liverpool School of Tropical Diseases will have to attend a two months' compulsory course at the London School of Tropical Medicine seeing that the former institution has facilities for affording instruction in West African diseases and that cases of these diseases very rarely reach London.

THERE is a universal desire among all classes of society to reduce to the smallest dimension the drunkenness of the nation. Opinion is sharply divided as to the merits of total abstinence. Large classes of society—larger than in any previous time—totally abstain from the dietetic use of alcohol. Leaders of science and physicians of great authority are among the number. And it is undeniable that the classes so abstaining contrive to lead cheerful and happy lives and to attain an age at least equal to that of those who drink moderately. Those who drink immoderately are out of the reckoning altogether. Some of them, indeed, have splendid constitutions, inherit a tendency to longevity, and reach even a remarkable age. Among the late Sir GEORGE HUMPHRY'S centenarians was one who had drunk "a great deal of beer," but there were 15 who had drunk no alcohol, 24 who had drunk little, and six who took it moderately,

so that the centenarian toper is an exception which proves a rule. But in spite of the increasing number of abstainers and of persons who drink with conspicuous moderation the expenditure on drink continues to grow, amounting last year to the prodigious total of £154,480,934 sterling, a net increase on that of 1897 of £2,199,211. Not only is the sum spent almost incredible, but the Registrar-General shows us that deaths from acute and chronic alcoholism are increasing, especially among women. The conclusion is irresistible that excessive drinking is still going on. Some of it, we believe, is based on an honest belief that drink is good—that is, "nourishing"—or that it strengthens—as in the case of BENJAMIN FRANKLIN'S fellow-pressman who took six pints of strong beer a day to make him "strong." The fascination of alcohol has been the theme of poets and writers from time immemorial, but it has certainly never been so powerfully illustrated and proved as it is to-day in the fact that one of the foremost nations of the world in religion, in arts, in science, in liberty, and in all that constitutes civilisation, spends out of its hard-earned income £154,480,934 on purchasing it for consumption, with very little good to show for the outlay and a very great deal of evil in the form of degradation, insanity, disease, and general misery. We are not drinking, indeed, quite so much per head as we were 25 years ago and we are not drinking so much per head as some other nations—France, Denmark, Belgium, Switzerland, the German Empire, and Würtemberg; but we are drinking more per head, judging by expenditure, than we have been drinking any time in the last 20 years, in spite of the influence of increased education and enormously improved social and sanitary conditions; and, as we have said, the diseases due to the acute and chronic forms of alcoholism are on the increase, especially among women.

Our object to-day is not to make any definite suggestions of our own, but to direct attention to a very remarkable suggestion which has been lately made by no less an authority than the Chancellor of the Exchequer. He was the guest of the Country Brewers' Association and he told them that an unprecedented amount of beer had been produced last year and that the production was increasing yearly. "There must be few babies and fewer tectotalers in the United Kingdom," said Sir MICHAEL HICKS BEACH, for "for every member of our population 31 gallons of beer are drunk in the year." He rejoiced at the fact and hoped that the increase would continue. "The people of the United Kingdom would be better off if *more beer* and less spirits were drunk." In short, Sir MICHAEL HICKS BEACH evidently regards beer as a sort of temperance drink the consumption of which should be encouraged as a means of diminishing the consumption of spirit. It is true that he spoke with gratitude of receiving £12,000,000 last year from the tax on beer and with hope of receiving half a million more in the current year, but Sir MICHAEL HICKS BEACH is much too good a man to speak so jauntily of his receipts from beer if he did not believe that he was speaking in the interest of the sobriety and virtue of the nation. There are some politicians who could not have spoken of beer as a temperance drink without exciting a suspicion that they were joking or practising on the credulity of their audience. But this is not the case with Sir MICHAEL HICKS BEACH. Can this view be entertained as a practical suggestion for the diminution of excessive drinking? It is certainly entertained by a large section of the public and it is perhaps true that excess in drinking beer is less acutely injurious than excess in drinking spirit, but it must not be forgotten that the amount of beer drunk already is enormous and that it is productive of unmistakeable harm in the classes which consume it. The rheumatism and gout of the working classes are often an outcome of their consumption of beer. Too much beer produces manifold forms of dyspepsia and visceral derangement. It tends, too, in the quantities we are referring to as used by the people after very early years to produce various degenerations, in the direction of senility, of tissues, glandular, nervous, and vascular.

"The poor man advancing in years," says Sir HENRY THOMPSON, "shows signs of damage to his constitution from continuous toil with inadequate food, the supply of which is often diminished by his expenditure for beer, which, although not seldom noxious, he regards as the elixir of life, never to be missed when fair occasion for obtaining it is offered. Many of this class are prematurely crippled by articular disease and become inmates of the parish workhouse or infirmary."

Few medical men will deny the truth of these words. Besides, is the issue so clear as the Chancellor of the Exchequer puts it? Does the consumption of more beer really mean the consumption of less spirit? Few medical men will admit such an opinion. We certainly know of no instance in which a spirit-drinker was saved by more copious potations of beer. The remedy, if not worse than the disease, is but one shade better. Beer-drinkers are by no means free from the vice of spirit-drinking and are certainly not unfrequently the subjects of cirrhosis. We commend these medical facts to the consideration of the Chancellor of the Exchequer and of all who are disposed to regard beer in the light of a temperance drink or as an alternative to the use of spirits. We may remind them that this view has once or twice prevailed in legislation with very doubtful effects. One of the objects of the free beerhouse legislation of 1830, as the secretary of the present Royal Commission on the Licensing Laws, Mr. SYDNEY PEEL, points out, was to discourage the drinking of spirits by encouraging the consumption of beer. But it failed signally. It would be disastrous if any new legislation were to be attempted on this principle. If the medical aspects of the case do not impress those who regard the consumption of more beer as likely to abate the drunkenness of the nation they will perhaps look at the moral aspects of beer-drinking as they may be studied in the proceedings of coroners' courts and police-courts where death and crime and brutality are often associated with excesses in beer. There is one other point of enormous importance which cannot fail to strike statesmen and even Chancellors of the Exchequer—that made by Sir HENRY THOMPSON in the extract which we have given above—viz., the effect of such an enormous expenditure on beer by the working classes in curtailing the power to purchase the other necessaries of life and the consequent physical and social depression of their families. We need not labour these points to

justify our contention that any increased consumption of beer, however good for the brewers and the national exchequer, will not conduce to sobriety or to a diminution of the disease and misery produced by alcoholism. We are apparently on the eve of new legislation on this subject. It is immensely important that we should know what we are doing and realise the causes of failures of previous efforts of the kind.

A VERY remarkable series of surgical triumphs was rought under the notice of the Clinical Society of London at their meeting on March 24th. In all the cases which were brought to a happy issue through the intervention of the surgeon the patients could only have looked forward to a miserable and lingering death had it not been for his assistance. The first case was one of aneurysm of the abdominal aorta which the President, Mr. LANGTON, had successfully treated by the method of introducing silver wire into the sac after he had exposed it. To puncture an aneurysm deliberately with a trocar, introduce two yards of wire, and then to seal up the opening safely is a heroic procedure requiring a rare combination of boldness, dexterity, and coolness, and Mr. LANGTON is to be congratulated in having achieved a success which has attended very few of the recorded attempts at carrying out this method of treatment. The case was a formidable one. The aneurysm was steadily increasing in size and as it sprang from the aorta above the origin of the superior mesenteric artery treatment by proximal compression was impracticable. As the result of the introduction of the wire there were almost immediate improvement, lessening of pulsation, and relief from pain. Later, it is true, after manipulation there were local signs denoting some return of circulation in the sac with alarming symptoms of collapse. These happily subsided under medical treatment and the sac with its consolidated contents became contracted into a small firm tumour, and it is satisfactory to learn that the recovery has been a permanent one and that the patient is still in excellent health, so that the case is entitled to a place in surgical records Mr. LANGTON is to be heartily congratulated upon the result. It is regrettable that there was no discussion on the subject, probably owing to the fact that there were no surgeons present who had themselves any experience of this rare operation.

Notable, however, as was Mr. LANGTON'S communication it was followed by one which still more strikingly demonstrated the great advance which surgery is making in dealing with certain diseases of the internal organs which were formerly considered beyond the reach of therapeutic measures. Mr. RUTHERFORD MORISON of Newcastle brought forward a series of cases of grave organic disease of the stomach on which he had performed the operation either of pyloroplasty or of pylorectomy. He had been at the trouble of bringing five of these patients from the north, all of whom had undergone pylorectomy for malignant disease of the stomach, and none of whom now would be suspected of having been the subjects of what was but lately considered to be a mortal malady—a patient from whom one-half of the viscus had been removed for colloid cancer being perhaps the most robust-looking of the group. They had gained weight and the gastric functions appeared to be properly carried on, the patients being able to take without fear any kind of food; they had, in fact, been regaled by Mr. MORISON at York Station a few hours before with a hearty dinner. These were not selected but consecutive cases and he mentioned that two other successful operations for excision of the pylorus for cancer had been performed by his colleagues during the last few months. Mr. MORISON had not only brought the patients but also the actual specimens removed and microscopic sections which left no doubt in the minds of those who saw them that the growths were really of a cancerous nature. The brilliant success which followed the operation in these cases afforded justification for the preference which Mr. MORISON gave to it over the temporary expedient of gastro-enterostomy, an operation which leaves the malignant growth behind and, in his opinion, entails risks when the stomach is dilated, so that he would employ it only where there has been so much local infiltration that pylorectomy is impossible. We are not yet in a position to judge of the permanence of the relief which the operation will afford, but in the cases shown by Mr. MORISON the most careful examination failed to reveal any local evidence of recurrence although in one case 18 months had elapsed since the operation. No doubt Mr. MORISON will be careful not to lose sight of these patients and will take the opportunity of informing the profession later of their progress so that it may be seen whether the removal has been early enough and thorough enough to dispel fear of local recurrence or distal infection.

Mr. MORISON'S paper cannot fail to give a great impetus to the surgical treatment of such cases and will stimulate the physician to perfect the methods of diagnosis so that surgical assistance may be obtained at so early a period that excision may be followed by a permanent cure. The paper was valuable not only as a striking object-lesson of the progress of surgery, but also as a demonstration that the surgeons in the provincial schools are not at all behind their metropolitan brethren in skill in planning operations and performing them.

Annotations.

"Ne quid nimis."

THE ROYAL COMMISSION ON SEWAGE DISPOSAL.

INQUIRIES are heard from time to time as to the progress which is being made by the Royal Commission on Sewage Disposal. The Commission have had over 25 expert witnesses before them, including chemists, bacteriologists, biologists, medical officers of health, and engineers, some of these witnesses having occupied the time of the Commission for two days each. Members of the Commission have visited the works of sewage disposal at the following places: Exeter, Yeovil, Manchester, Rochdale, Chorley, Sutton, Doncaster, Dewsbury, Bradford, and Leeds. They have also been engaged in determining a number of important questions relating to the desirability or not of laying down chemical and bacteriological standards which should

be obtained by effluents whether in the case of domestic sewage only or of such sewage combined with trade refuse. For this purpose they have employed experts of their own, and it is understood that the staff of chemists and bacteriologists has just been increased, so that the effluents from works of different character can be systematically studied almost hourly by day and by night under varying conditions of temperature and rainfall. No statement can as yet be made as to the term over which these experiments must extend, but it is quite clear that they are at present only in an initial stage and that, in so far as bacteriological results are concerned, the Commission are dealing with a subject as to which little expert evidence is available and that the matter will have to be examined very deliberately and exhaustively before useful inferences can be drawn. These experiments are being carried out under the supervision of a committee of the Royal Commission consisting of Sir Richard Thorne, F.R.S., Professor Michael Foster, F.R.S., and Professor Ramsay, F.R.S.

WINTER AND SPRING COLDS.

THE climatic variation which is one of our insular characteristics has not been without effect upon the public health during the present year. Colds have filled an important place in the practitioner's daily round of duty. The recorded ratio of deaths from diseases of the respiratory organs has followed on the whole an ascending course. It is impossible to dissociate such facts from the co-existent weather conditions even if we allow, as we justly may, that these probably operate in many instances together with other causes of injury to health. A mild, wet, and windy January, a February bleak and stormy, a March obscured by fog or sharp with winter frost and snow, though doubtless of considerable agricultural value cannot be regarded from a sanitary standpoint with equal satisfaction. Nor are the reasons for a certain feeling of dissatisfaction far to seek. The contagia which lodge in a dense and humid air and the directly depressing effect of cold have both severally and in common much to do with the causation of illness. The answer to the question whether an external chill should result in bodily injury or not can only be given, it is true, in relative terms, but it must often be given in a sense unfavourable to the person attacked. The presence of a degree of vital resistance adequate to the cold encountered or, in other words, a relatively capable heart and blood-vessels under strong and steady nervous control, affords the best condition of successful resistance. Unfortunately conditions of physical inheritance, birth, age, and mode of living do much in very many cases to modify this ideal position of advantage. Thus we have more frequently than not to take account of some degree of unpreparedness. The robust man should, indeed, be the type of ordinary humanity according to Nature's logic and he probably is when found in Nature's uncultivated wilds. It must be remembered, however, that civilisation has made a difference and also that civilised man has in various ways increased that difference in vital force between him and a more simply living ancestry. Consequently we have become familiar with the depression which so often follows exposure and make allowance for it more or less in all cases. More particularly and for obvious reasons the dweller in towns requires such consideration. But there is another agent at work in the process of "catching cold" which we have also mentioned. This is atmospheric impurity. The prevalence of influenza in the metropolis during the last few weeks may possibly be enhanced by this cause. The same explanation adapts itself to the explanation of those infectious "colds in the head" and bronchial disturbances of allied character which are apt to be suddenly developed during a foggy season. It would seem from these observations that such illness as is usually associated with weather changes is to a large extent preventable. It is also evident that no elaborate medical system is needful for this purpose, but that common prudence is indispensable. It is the weak man's wisdom and no disgrace to admit that he must protect and husband his reserve of strength and not emulate the unconcern of more hardy fellows. The man of business, again, ought so to arrange that he does not sit in a chilly office after casting off his winter overcoat. No one should overlook the value of dry and absorbent flannel underwear or the equal importance of using clothes of warm material till the summer is well in. Of the dangers of fog we need not speak. They are familiar to every resident in a large town. It is singular, however, that the necessity of breathing air as pure as it can be obtained is constantly disregarded. If the proper ventilation of private houses, and especially of places of business, were insisted on by their owners we should hear much less than we do of the infectious forms of so-called cold. With this object, also, every reasonable opportunity should be used and afforded of taking exercise in the open air and this ought not in any case to prove incompatible with the active and orderly conduct of daily business.

COFFEE.

"'COFFEE, please,' says Tom, with his mouth full of muffin and kidney; coffee is a treat to him, tea is not." For some mysterious reason, or more probably for no reason at all other than mere chance, coffee has never risen to the rank of a popular English beverage, but still remains an unusual gratification just as it was in "Tom Brown's School Days"; and yet coffee when properly treated is a most excellent and wholesome article of diet, being advantageously miscible with milk whilst readily bearing or for some even demanding the addition of sugar. Many English people drink tea devoid of one or other of these adjuncts, if not of both; but except in the form of *café noir*—a form to a large extent unknown on our side of the Channel—the sister beverage is seldom taken without them. It is, of course, unnecessary to dilate on the nutritious properties of milk and the value of sugar as a restorative has at length been recognised, but it is not so generally known that the coffee berry itself is not altogether destitute of nutritive qualities. According to Dr. Fort who conducted some interesting experiments *in propriâ personâ* coffee in moderate doses is an excitant of the nervous system, augmenting the reflex properties of its several centres and consequently acting as a stimulant and tonic to all organs of the body. On the other hand, Messrs. Gasparin and Payen maintain that coffee produces its effects by retarding the processes of disassimilation and that it is an "inhibitory aliment" and therefore peculiarly suitable for indigent people, for travellers, and for everyone who suffers from defective appetite. However it may act there can be no doubt that coffee does affect the human economy in a peculiarly agreeable and beneficent manner. It is fairly cheap, easily prepared, although less so than tea, an admirable calorifacient, and there is nothing whatever to forbid its habitual use in moderation whether with meals or at other times. On the whole, therefore, it would seem that its more extended utilisation in these islands is highly to be desired. In 1896–97 the amount of coffee, raw and manufactured, upon which duty was paid in our Custom houses was only about 12,000 tons, whereas according to *Le Bulletin de Statistique et de Législation Comparée*—a French official publication—the total amount consumed in Europe and the United States was no less than 623,320 tons. Holland, we learn from the same authority, is the country where the drinking of coffee is most in vogue,

the quantity disposed of per head per annum being upwards of 10 kilogrammes. Denmark and Belgium come next with seven and five kilogrammes respectively, while in France the allowance per inhabitant is no more than one and a half kilogrammes. On the Continent it is apparently the sum levied as duty which determines the amount consumed. In Holland coffee is entirely untaxed. In Denmark and Belgium the charge is insignificant, but in France it amounts to the almost prohibitive rate of 156 francs per 100 kilogrammes, or about 7*d.* a pound avoirdupois. The tax with us is only 1½*d.* a pound for the raw article and 2*d.* when it is manufactured, so our trifling consumption of about a third of a kilogramme per head cannot well be due to fiscal causes. The production of coffee is said to be increasing rapidly in South America and to be assuming large proportions in Central Africa. In the Rio districts alone the augmented output for the four years ending 1897 was equal to 4,000,000 sacks, or about 240,000 tons. Writing in the *Revue des Deux Mondes* for July, 1898, M. de Castries says: "They are planting at least 600,000 coffee plants every year in the Congo Free State and everything favours the hope that in a few years the output will have risen to upwards of 26,000,000 kilogrammes." If this is the case the price of coffee should soon fall, when in all probability our consumption of six pounds of tea per head per annum will suffer a diminution.

TUBERCULOSIS IN THE FRENCH NAVY.

IN 1891 special instructions were issued by the French naval authorities to the effect that the utmost care should in future be exercised in carrying out the medical examination of all candidates for service in the navy whether they presented themselves voluntarily or on compulsion. No recruit whose lungs showed the slightest sign of disease was on any account to be accepted, and even in the absence of active symptoms, lack of chest development, general ill health or physical weakness were to be looked upon as sufficient causes for rejection. "In spite, however, of the rigorous application of this ordinance," says Dr. L. Vincent in a recent paper in a French medical contemporary[1]; "in spite of the numerous eliminations that are yearly effected in every port by special invaliding commissions; in spite of the hygienic ameliorations that of late years have taken place on board war vessels, that redoubtable affection, tuberculosis, is still responsible for a very large share of the mortality in the fleet, the deaths that are ascribable to it amounting to nearly one-half of the total number." In his capacity as principal medical officer of the Northern Squadron Dr. Vincent enjoyed exceptional facilities for inspecting the hospital records at Brest and elsewhere, and he has accordingly drawn up a series of tables referring to the decennary 1888–97, upon which he bases his conclusions. The average strength during the period was 5400 men of all grades whose duties involved service afloat. The number of deaths from all causes varied annually between 63 and 155, and those from tuberculosis between 35 and 69, the average numbers per annum having been 112 and 50 respectively. The total death-rate was equal to 20 per 1000 of strength, while that from tuberculosis alone came to as much as 9·27 per 1000. These figures are very high, but according to Dr. Vincent this is partly due to the fact that fully seven-tenths of the entire *personnel* of the French navy hail from Brittany and the men are consequently sent to Brest to be disposed of when invalided from other stations. Writing in collaboration with a brother officer Dr. Vincent has elsewhere[2] stated that the general death-rate in the French fleet, with an average strength of 40,000 men, is estimated at no more than 11 per 1000, that for tuberculosis being 2·92 per 1000, but the returns upon which these rates are founded refer only to the quinquennial period 1891–95. Whatever the precise state of the case may be it is evident that preventable lung disease prevails to a very considerable extent in the French navy. "Considering the care exercised in selection and all the other precautions adopted," continues Dr. Vincent, "the result ought to be a complete absence of all consumptives on board our vessels, but unhappily this is only true for a very brief period after each fresh commissioning." Men who apparently were in perfect health speedily exhibit the fatal signs and notwithstanding every care the disease becomes established. One of the chief predisposing causes, in his opinion, is the abuse of alcohol—that universal curse among Breton sailors who otherwise are such worthy people; but the filthy habit of promiscuous expectoration is also largely blameable. Spittoons are duly provided and the most stringent notices are posted up conspicuously, but in spite of all prohibition the men persist in "spitting about pretty nearly everywhere." Incidentally we learn in this connexion that in the French navy not more than from 8 to 10 per cent of the men chew tobacco. The smokers number 50 per cent., so not less than 40 per cent. must be total abstainers from "the weed."

[1] Tuberculosis in the French Navy. Archives de Médecine Navale, January, 1899, p. 36.

[2] Statistique Médicale de la Flotte Française, par les Drs. Vincent et Burot, Paris, 1897. Travail récompensé par l'Académie de Médecine. Prix de Statistique de l'Académie des Sciences.

INFECTION BY SPEAKING TUBES.

A CORRESPONDENT, Mr. C. H. Cooper, A.M.I.C.E., writes to us a very pertinent letter in which he draws attention to the possible spread of infection by speaking tubes. These tubes, says our correspondent, are practically unventilated except when in use and when the person using them speaks the moisture in the air which he exhales condenses on the sides of the tube, so that the products of respiration remain for the benefit or otherwise of the next two persons using the tube. Our correspondent says that he much prefers the use of the telephone. It is quite within the bounds of possibility that tuberculosis or influenza might easily be spread by the speaking-tube, for to make the whistle at the far end sound the person calling has to place his lips in actual contact with the mouthpiece at his end. In a telephone this is of course not the case and there is certainly one form—and maybe more—of local telephone—i.e., a telephone which can be used between one room and another which works very well. The connecting wire has great advantages over the connecting tube in that it can be run anywhere without disturbance of walls or plaster. There are so many sources of infection which cannot be avoided that it is just as well to obviate those sources which can without inconvenience be done away with.

HAWAII AND ITS DISEASES.

FOR a considerable time a somewhat acrimonious correspondence has been in progress in the *New York Medical Record* regarding the health of Hawaii and particularly with reference to the prevalence of leprosy there. The *fons et origo* of the discussion was an article which appeared in that journal on Oct. 15th last. The writer of the article in question quoted from a letter written by Dr. Prince A. Morrow in 1889, in which he said (referring to the health of Hawaii)—"The demographic effects of introduced diseases in a virgin soil can nowhere better be studied and they exhibit facts of the most remarkable interest. The natives have proven strangely susceptible to the diseases of civilised life, and trifling ailments—such as measles, whooping-cough, &c.—acquire by their transplantation into this soil all the virulence of a fatal pestilence. Measles and whooping-cough, introduced in 1849, almost decimated the population; the mortality was excessive, almost every case

terminating fatally. The ravages of small-pox, introduced in 1853, were none the less frightful. In the island of Oahu over 15,000 died and the marshal of the islands informed me that he superintended the burial of 10,000 victims of this disease in Honolulu alone—more than one half of its entire population." With regard to leprosy Dr. Morrow said: "Nowhere else in the world can be found a parallel to the extraordinary development and rapid spread of this disease which in the short space of little more than one generation has attained such alarming proportions and proved such a terrible menace to the public health." The article in the *Medical Record* proceeds to state, on the authority of Dr. Burnside Foster, that matters had not changed much for the better since Dr. Morrow wrote in 1889 and that at the present time 10 per cent. of the Hawaiian natives were lepers. Dr. F. R. Day, a member of the Honolulu Board of Health, while admitting the truth of Dr. Morrow's statement as regards the first half of the century vigorously denies that matters have not changed for the better, and he gives statistics supporting his contention. In the *Medical Record*, however, of Jan. 28th, 1899, Dr. Morrow writes as follows: "As there has been so much conflicting testimony on the point I send you statistics of the leper settlement since its establishment which have been carefully compiled from the reports of the Hawaiian Board of Health."

Year.	Admissions.	Deaths.	Discharged or unaccounted for.	Number on books Dec. 31st of each year respectively.
1866	141	26	10	105
1867	70	25	7	143
1868	115	28	2	228
1869	126	59	11	284
1870	57	58	4	279
1871	183	51	9	402
1872	105	64	4	439
1873	487	156	21	749
1874	91	161	8	671
1875	212	163	14	706
1876	98	122	3	677
1877	163	129	1	710
1878	239	147	—	706
1879	125	209	1	717
1880	51	152	10	606
1881	232	132	—	706
1882	71	121	6	649
1883	301	150	15	785
1884	108	168	8	717
1885	103	142	26	656
1886	43	100	8	590
1887	220	108	4	698
1888	579	212	28	1035
1889	308	149	7	1187
1890	202	158	18	1213
1891	143	212	2	1142
1892	109	137	19	1095
1893	211	151	—	1155
1894	128	155	3	1124
1895	106	123	15	1087
1896	146	116	2	1115
1897	124	139	—	1100

Dr. Morrow appears to be of the opinion that, judging from the foregoing figures, leprosy does not show signs of abating to any great extent in the Sandwich Islands, while Dr. Day holds the opposite view, thinking that the health authorities are slowly but surely making headway against the spread of the disease, and he predicts that the day is in sight when leprosy will be unknown in Hawaii. Surgeon D. A. Carmichael of the United States Marine Hospital Service who was appointed by the President to report on leprosy in the Sandwich Islands completed his report a short time ago. From his showing leprosy has decreased but little there and he sounds a note of warning against the dangers of importing leprosy from the Sandwich Islands into the United States. Surgeon Carmichael was greatly impressed with the excellent manner in which the leper settlement at Molokai is managed. There seems to be unanimity of opinion among those best qualified to judge that complete segregation is the only effective means of stamping out leprosy, and if this system is applied rigorously to Hawaii it should have the desired effect there.

MORE SUNDAY NEWSPAPERS.

THE secretary of the Society for the Suppression of Street Noises writes to us on this subject, saying that he hopes that the system of seven-days-a-week newspapers will be strenuously resisted. Everybody should get one day in the week off work. It cannot always be Sunday, but a six-days' working week is enough for any man. A great objection to Sunday newspapers is the yelling which at present seems inseparable from their distribution. In the matter of street noises the London County Council is willing in spirit but very weak in flesh, for it gave in to the protest of a weekday newspaper owner, or part owner, on the subject. The Government do nothing. Noise, dirt, smoke, and ill-health will go together until severe measures are taken. But when will they be taken?

BUMBLEDOM IN AYR.

THE Town Council of Ayr has at last got to the end of a long fight with the Local Government Board of Scotland. The subject has been the inter-relationships of the medical officer of health and the sanitary inspector. That is a question which from first to last has caused a good many struggles north of the Tweed, though these struggles are happily getting fewer, and the proper position of the medical officer is coming to be more and more fully recognised. When the profession succeeded in getting the Public Health (Scotland) Bill of 1897 very much modified and improved in this respect in the course of its progress to the statute-book the battle was in great measure won, but the town councillors of Ayr have been very long in recognising the fact. They were determined that the sanitary inspector should in all matters be practically independent of the medical officer. The Local Government Board were equally determined that this should not be permitted and the town council, after interposing every obstacle and delay which ingenuity and obstinacy could suggest, have at last been forced to yield. That they have done so with a very bad grace only goes to prove their own consistency. It is true that all along a small minority, headed by Councillor W. J. Naismith, M.D. Edin., have upheld the views of the central authority and have urged the council to bend to the inevitable, and we fancy the majority must now regret that they did not follow the advice which they received. They are thus at the end of one fight, but that by no means terminates their troubles with the Local Government Board. It seems that their hospital accommodation is insufficient and unsatisfactory and that with regard to it they have been pursuing the same dilatory course, so that now, after endless correspondence, legal proceedings are being instituted by the central authority to compel the local authority to do its duty. The extraordinary ignorance and perversity of the latter are indicated by the fact that they have proposed to erect a reception house within the curtilage of a small-pox and cholera hospital, and the vigour with which the Board denounces this suggestion is a quite refreshing feature of a purely official document. It is nothing less than marvellous that a place the prosperity of which largely depends

upon its reputation as a healthy and pleasant sea-coast residential town should be governed by a local body whose doings are likely to bring it into notoriety as a place which, sanitarily speaking, is ill managed, and which refuses to accommodate itself to some of the most elementary requirements of modern public health administration.

COMPANIES AND THE MEDICAL PROFESSION.

As will be seen by a reference to our Parliamentary Intelligence the Lord Chancellor has introduced into the House of Lords a Bill to prohibit the profession or business of physician, surgeon, dentist, or midwife being carried on by a company. We have not yet seen the text of this Bill, but we should hope that it is so drafted as to include medical aid societies. These societies in many cases sweat their medical officers in the most disgraceful manner, as we have frequently shown in our columns.

THE ASSOCIATION OF ASYLUM WORKERS.

WE have received the annual report and financial statement of the Association of Asylum Workers for the year 1898. The association was formed to look after the interests of those working in asylums, both medical and lay. The care of the sick is in all cases very trying work and the care of mental disease is one of the most exacting forms of attendance on the sick. The responsibility is very great and the constant association with some form or other of mental disturbance is apt to react disastrously upon the minds of those who attend upon such patients. Hence change of air and scene is very necessary for asylum workers, and we are glad to see that part of the good work of the association under consideration is supporting a "home of rest fund" by which nurses or attendants are granted two or three weeks' holiday at some suitable health resort free of all expense or trouble. The association also looks after the interests of asylum workers in connexion with proposed legislation, such as the new Lunacy Bill, and also trains attendants and nurses for their duties. The financial position of the association is satisfactory, there being a balance of £137 14*s.* 3*d.* The secretary of the association is Dr. G. E. Shuttleworth who will be happy to receive subscriptions or donations.

TABES DORSALIS WITH HEPATIC CRISES.

IT is well known that in the course of tabes dorsalis patients are liable to suffer periodically from paroxysmal pains affecting various parts and organs of the body. In the *Journal of Nervous and Mental Disease* (February, 1899) Dr. W. Krauss of Buffalo records a case of special interest in which the patient suffered from characteristic attacks of hepatic crises—a condition, it would appear, hitherto unrecorded—the importance of which lies in the fact that this "syndrome" might have been easily mistaken for a separate and independent ailment of the liver were it not that the associated symptoms served to indicate its tabetic origin. The case was that of a woman, aged 44 years, who had hitherto enjoyed good health and was free from syphilitic taint, hereditary or acquired. She menstruated in her fourteenth year and was married at the age of 23 years. At 36 years of age she began to suffer from shooting pains in her legs occurring at intervals and disappearing without obvious cause. Locomotion became gradually difficult and necessitated the use of crutches eventually. Later she suffered from excruciating pains over the right hypochondrium, accompanied by a pronounced jaundiced tinge of the skin and mucous membranes; these attacks recurred every four or five weeks and then slowly passed away, leaving her weak and exhausted in bed for several days. The pains were deep-seated, very intense, neuralgic in character, and continuous. To procure relief and to obtain sleep large doses of morphia had to be subcutaneously injected. The jaundice would usually last from four to six days. There was no accompanying gastric disturbance; the bowels were on these occasions regular and the stools were clay-coloured. The urine showed the presence of bile pigment. The hepatic area during a crisis was acutely tender and sensitive to touch—to such an extent that even the pressure of her clothing was intolerable; when the attack was over this tenderness disappeared. The treatment was "suspension," and this she was able to go through when the hepatic crises were over. However, in spite of treatment her ataxy increased; the pupils became myotic and exhibited the characteristic Argyll-Robertson phenomenon. There was no optic atrophy or external ophthalmoplegia. She gradually lost strength and wasted perceptibly, the hepatic attacks became more and more intense, and she finally died from wasting and exhaustion. The necropsy revealed a normal condition of the heart, lungs, and viscera generally, excepting the liver. This organ was much congested and of the typical mottled or "nutmeg" appearance. The gall-bladder was normal and free from gall-stones. The spinal cord on preparation by Weigert's method presented a "sclerosis of the posterior tracts throughout the entire length of the cord." No lesion was found in the abdomen or thorax which could explain the "nutmeg" condition of the liver and nothing to which could be attributed the paroxysmal and severe crises of hepatic pain and jaundice which Dr. Krauss accordingly ascribes to the morbid process within the spinal cord affecting the nerves supplying the liver and gall-bladder. To the various *crises tabétiques* of Charcot—viz., the gastric, laryngeal, cardiac, and rectal—must now be added the hepatic, which with the rare type of vesical, nephralgic, and urethral, and including in females the clitoric, complete the list of these painful and paroxysmal syndromes which may occur in the course of tabes dorsalis.

THE CREMATION SOCIETY.

AT the general meeting of the members of this society held at Grosvenor House on March 15th Sir Henry Thompson who was in the chair moved the adoption of the report and gave an address upon the progress made by the society since its inception in 1874. After detailing the various legal difficulties which the society had to overcome Sir Henry Thompson mentioned that the first body cremated in the society's crematorium at Woking was that of a lady on March 26th, 1885. In that year the number of bodies cremated was three. In 1898 the number had risen to 240. Sir Henry Thompson then spoke of the efforts made by the society to bring about reforms in the present very loose system of death registration. The report of a Select Committee published in 1893 fully agreed as to the necessity for such reforms, but up to the present nothing has been done to bring such reform about. Besides the crematorium at Woking others have been erected at Manchester, Liverpool, Glasgow, and Hull. With reference to examinations into the cause of death which are so necessary before the cremation of a body it was mentioned that Dr. Sidney Martin had accepted the post of pathologist to the society. Sir Henry Thompson concluded by referring to the question as to whether cremation should not sooner or later be made compulsory in all cases of death caused by acute infectious disease. There are strong arguments in favour of cremation replacing earth burial, or rather coffin burial, in all centres of population, but even in rural districts we are of opinion that there is every room for improvement in the method of burial as at present carried out. Perishable coffins should be used and graves should

not be dug to nearly so great a depth as they are at present. The earth at a greater depth than six feet is dead and decomposition proceeds with extreme slowness. Besides, what is the sense of enveloping a corpse in one or more thick coverings which prevent the forces necessary for disintegration from doing their needful work?

THE PETROLEUM BILL.

IT is stated that the Petroleum Bill to be introduced by Mr. Jesse Collings provides for the raising of the flash-point from 73° to 85° F. and for the regulation of the construction of lamps. This looks like a compromise, the figure 85° occurring almost exactly half way between the present flash-point and the one advocated by the partisans of the high flash-point (100°). It seems to us that the arguments urged by Mr. Collings against raising the flash-point to 100° apply almost equally to raising it to 85° or at all. We await with interest the discussion of the Government proposals and the exact details of the provisions of the Bill.

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

THE election of Dr. William Selby Church as President of the Royal College of Physicians of London will be received with satisfaction by the medical profession, but more especially will pleasure be felt within the College itself where Dr. Church's qualifications for such a post are fully appreciated. He has always taken the keenest interest in the affairs of the College and as Senior Censor his dignified bearing and grasp of detail pointed him out as a probable future occupant of the presidential chair. We add our cordial congratulations to the numerous tributes which he will no doubt receive. The election was closely contested and Sir William Broadbent, although defeated by 10 votes in a poll of 144, must nevertheless have felt gratified by receiving so large a proportion of support from the Fellows. In Dr. Church the College has a President whose scientific and literary attainments can only redound to its credit and who will prove a worthy representative in other than purely medical circles.

MEDICAL LEGISLATION FOR THE ISLE OF MAN.

THERE are some consolations for the fewness of Imperial Medical Acts. One of them is to be found in the fact that they are apt to be taken as standards of perfection to be slavishly reproduced by local legislatures. The draft of a Medical Bill for the Isle of Man is before us which in its preamble and its essential clauses follows closely the lines of our own Act of 1858. The preamble sets forth the expediency that persons requiring medical aid should be able to distinguish qualified from unqualified practitioners; Clause 3 defines the privileges of registered persons and provides that every person registered according to the provisions of the Act of 1858 and of subsequent Acts amending it shall be entitled to practise medicine, surgery, and midwifery and to recover charges in respect of such practice, of medicaments, and of other appliances; Clause 5 provides that none but registered persons shall be entitled to recover any charge in a court of law for any medical or surgical advice or attendance, or for the performance of any operation, or for medicine, prescribed and supplied; Clause 7 enacts that no unregistered persons shall hold medical appointments in public institutions, hospitals, friendly and other societies, &c.; Clause 8 provides that no certificate shall be valid unless signed by a registered person; and Clause 9 is a reproduction of the famous Clause 40 of the Medical Act, with a significant difference—the omission of the words "wilfully and falsely." The Bill is very well as far as it goes, but it is disappointing, in view of the proved inefficiency of the Imperial Acts, to see a local legislature repeating all the impotent phrases and sentences of the original Act which all are so anxious to see amended. It is the more lamentable as the present legislative proposals are understood to be made at the instance of the medical profession which in a limited community with a compact Parliament should be able to guide and mould such legislation. The primary object of all such Acts is, of course, the protection of the public. To this end medical practitioners are provided who are to be duly registered in the Imperial Register—the registration guaranteeing due education and examination. As a part of this protection unregistered—that is, uneducated and unexamined—persons should be kept out of the field. They should be prevented under penalties from "practising" on Her Majesty's subjects—the worst form of vivisection. Clause 40 of the Medical Act protects mere titles. We want legislation that will protect the lives of the people from the experiments—that is, from the "practice"—of all sorts of pretenders whether they use titles or not. In the clause regulating the use of medical titles the words "wilfully and falsely," as we have said, are omitted. This is the only original effort of the framers and would seem to have been suggested by the recent case in which the use of a title judged illegal was not punished because not done "wilfully or falsely." The misuse of a title doubtless should be made illegal; but the whole question of medical titles is in a very unsatisfactory state and needs more attention than is implied in this clause. We venture to advise the profession in the Isle of Man to consider further the essential demands of a good Medical Bill even at the expense of some delay in getting it.

THE ROYAL BERKSHIRE HOSPITAL.

IN May of last year a committee was appointed to examine into, and report upon, the financial position and general administration of the Royal Berkshire Hospital. The chief alteration which concerns us is a proposed rule that the medical staff should be re-elected annually. The electors are the elective committee which consists of the board of management and 12 governors. Should any member of the staff fail to be re-elected he is to be at once notified of the fact and his connexion with the hospital as a member of the staff will cease. We cannot think that this is a fair or just arrangement. So far as we can see, the medical staff are to have no voice whatever in the management of the hospital from an ex-officio standpoint, though we suppose that there is nothing to prevent a member of the staff qualifying as a governor by means of making a donation. It is not just, moreover, that any member of the staff should be liable to be suddenly shelved without any reason being given. We fully agree with the argument that the fact of a medical man being a member of the staff of a well-known hospital is an advantage to him both in the matter of gaining experience and also in prestige. But it must be remembered that a hospital is not essential to a medical man, while medical men are essential to a hospital. So far as we know, in every metropolitan hospital a member of the staff when once elected is considered as a member for life or rather until he reaches a certain age. Another point of importance is the question—When do these new rules, if passed, come into operation? Are they to be prospective or retrospective? If the latter it will be very hard for any member of the present staff (and some of the practitioners upon it have served for a long term of years) to suddenly receive his *congé*. We are not oblivious to the fact that the staff of a hospital is not composed of infallible persons or that circumstances might arise in which it would be desirable to get rid of a person or persons on the hospital staff, but surely better methods exist than the somewhat crude one formulated by

the committee in this case. We earnestly hope that the rules as they stand will not be passed, and even if they are that at least they will not be retrospective.

THE SALE OF FOOD AND DRUGS BILL.

THE Government would seem to be trifling with this section of home administration which is in urgent need of reform. The Bill which was introduced by Mr. Long two weeks ago was a meagre and utterly inadequate measure, but it just enables the Government to say that they have considered one of the reforms promised in the Queen's Speech. We notice with satisfaction that the Bill is meeting with strenuous opposition. It was decided, however, to commit the Bill to the Standing Committee on Trade and Mr. Long promised that it would shortly have the advantage of detailed examination. We should have thought that the labours of a Select Committee which sat for nearly four years would have sufficed to guide the Government in this important matter.

THE SMOKE NUISANCE.

THAT admirable association the Coal Smoke Abatement Society, though not yet four months old, has already done a good deal towards setting on foot the movement for a clean London. It issues forms of complaint which can be filled up by ratepayers and returned to the society, a duplicate at the same time being sent to the vestry. A coal smoke abatement section will be open at the forthcoming International Building Trades Exhibition at the Royal Agricultural Hall. One thing at a time is, we suppose, an excellent motto for any society, but as medical journalists we are chiefly interested in the prevention of smoke from a medical point of view, and smoke goes together with another nuisance—noise. Fresh air and sunlight are the two great remedies against not only tuberculosis, but many other diseases. That smoke is an enemy of both these beneficent agencies is undeniable. It blots out the sun, and the average housewife will not keep her windows open when torrents of smuts are blown in and make her house filthy. Absolutely preventable dirt and absolutely preventable noises are the chief enemies to open windows, and they must both be fought. The London County Council was apparently anxious to do something to relieve London of these torments and existing Acts can do a great deal if they are carried out, but as we said upon a former occasion there is great need for an Act to make it obligatory for anyone building a new house to have the fireplaces fitted with some form of smoke-preventing apparatus.

DR. HEINRICH PORT, late of Finsbury-square, who died on March 25th, was born at Nuremberg on Oct. 24th, 1843, and was the son of the Rev. Christoph Port, Pastor of St. Lorenz Church, Nuremberg. The deceased took the degree of M.D. at Erlangen University in 1866 and came to England in 1868 as house surgeon at the German Hospital, Dalston. In 1870–71 he served with distinction on the medical staff of the Bavarian army during the Franco-German war and received the Military Order for Merit, the highest distinction given to non-combatants. Returning to England after the war he became one of the honorary physicians of the German Hospital, an appointment which he held till his death. He was elected in 1886 a Fellow of the Royal College of Physicians of London and was for many years examining physician to the National Hospital for Consumption at Ventnor and physician to the North British and Mercantile Insurance Company.

DR. T. GRIGOR BRODIE, at present lecturer on Physiology at St. Thomas's Hospital Medical School, has been nominated by the Laboratories Committee of the Royal College of Physicians of London and the Royal College of Surgeons of England to be Director of the Research Laboratories on the Thames Embankment, in the room of Dr. Sims Woodhead, who has been elected Professor of Pathology in Cambridge University.

DR. WALDO read on March 21st to the Vestry of St. George-the-Martyr, Southwark, a highly interesting report upon an outbreak of typhus fever which had recently come under his official notice. We hope shortly to refer to the report at greater length. In one house, we may say, seven members out of a family of eight and a lodger were attacked, and two died.

THE library of the Royal Medical and Chirurgical Society will be closed from Good Friday, March 31st, to Monday, April 3rd, both days inclusive.

INFLUENCE OF LOCALITY ON THE PREVALENCE OF MALIGNANT DISEASE IN THE COUNTIES OF WARWICK, STAFFORD, SALOP, AND WORCESTER.

INTERIM REPORT OF THE COMMITTEE APPOINTED BY THE BIRMINGHAM AND MIDLAND COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THIS Committee, which consists of Dr. R. M. Simon (chairman), Mr. T. Law Webb, Dr. Thomas Wilson, Dr. Douglas Stanley, and Dr. E. N. Nason (honorary secretary), was appointed at a meeting of the Branch before which a paper on this subject had been read.[1] The meeting after an interesting discussion considered that the questions raised were of sufficient importance to warrant further investigations upon the lines suggested in the above-mentioned paper but upon a wider basis. With this object in view a resolution proposed by Mr. Lawson Tait and seconded by Dr. Simon was unanimously adopted appointing a committee of five. The Committee has met four times and has collected a large amount of evidence from the counties of Warwick, Stafford, Salop, and Worcester.

The questions to be investigated have been approached in an absolutely impartial spirit and the Committee has not concerned itself with any theories as to the ultimate nature of any "local influence" which may be present, but has spent its time in collecting facts which may prove or disprove the existence of such influence. So far returns have been received from nearly 50 registration areas in the counties above mentioned and promises of returns from many others. These registration areas have for the most part been subdivided into parishes or groups of parishes and the returns from them extend, with one or two exceptions, over a period of 10 years. The total population of the districts from which returns have been received amounts to somewhat over 600,000 and the total number of cases of malignant disease recorded to about 3500. The Committee has also obtained returns from some of the larger hospitals. The plan adopted in the various registration areas has been to obtain returns of cases by the help of some medical man resident in the district who was sufficiently interested in the inquiry to give the necessary time and who knew the physical characteristics of the district from which he supplied returns. These returns have been obtained from the registers through the courtesy of the various superintendent registrars, to whom the Committee tender their best thanks. In many cases the returns have been accompanied by very valuable reports which have been of the greatest assistance to the Committee.

It is not intended, nor indeed would it be possible, in this report—which as many of the promised returns have not yet come in must necessarily be incomplete—to deal with all the different districts included in the scope of the present investigation or with more than a few of the many points of

[1] "The Influence of Locality on the Prevalence of Malignant Disease," by E. N. Nason, M.D. Cantab., Brit. Med. Jour., March 12th, 1898.

interest which have been noted. It may, however, be interesting to the Branch to hear some few particulars of the work done by the Committee as showing the kind of facts which have been collected and which have an important bearing upon the questions which the Committee is investigating. The following extracts from some of the reports which have been received will also serve as a guide to those whose reports have not yet been sent in.

The percentage death-rates[2] for malignant disease for 10 years vary greatly in the various districts and parishes, between the low rates of from 0·3 to 0·35 in some to the high rates of from 0·75 to 1·5 in others. In some portions of these latter districts the rates are higher still, as noted by Mr. Rubra and Dr. F. M. Rowland, to whose reports reference will be made later. The M—— registration area has a cancer death-rate much above the average. This is found on analysis to be chiefly due to a group of parishes M——, H——, G. P——, and L. P——. The rates in these parishes are respectively 1·77, 1·74, 1·3, and 1·98. It is found that the mortality in the adjoining district of C—— drops to 0·68 and in the parish of C—— itself to 0·51. In the opposite direction a steady decrease is also found passing through the villages of B——, F——, and A——, with percentages of from 0·8 to 0·7, till the large district of F—h—l is reached with the low percentage of 0·34. Mr. Wall in his report of the M—— district says, speaking especially of the sub-district of H——: "Some parts of it are very marshy and low lying"; C——, on the contrary, lies on the steep slope of a hill. The F—h—l district again is on higher and drier ground. Mr. J. Orton in his report of this district says: "The River Sowe is the only stream in this district and flows through the scattered district of S——. The subsoil here is a thin layer of clay overlying sand and sand rock, both very porous."

Mr. Rubra has forwarded a very full and interesting report of the T——h and Fa——y districts from which report the following extracts are of special interest. "I find nearly one-third of the deaths (from malignant disease) in the township of T——h occurred in a small area a little more than a quarter of a mile in length. I have personally taken a census of this area which is not thickly populated. There are 517 inhabitants, practically all the houses being occupied. This gives a percentage mortality of 1·9, or nearly four times that of the rest of the T——h district. With regard to its physical conditions, the river Tame, which is highly polluted with sewage from the Birmingham district, flows a sluggish black stream in close proximity, some of the houses being on its banks. As a little further from the river a boring proves that the ground water rises to the level of the river it is only fair to suppose that the polluted stream percolates throughout the area. I need scarcely say that the subsoil, which is mostly clay and gravel, is very damp; ground fogs are prevalent and floods not unknown. The majority of the inhabitants of this area are poor people existing in mouldy old cottages, the floors and walls of which are generally damp. The water-supply, however, is excellent, being pumped from deep wells two miles away."

Dr. A. J. Martin makes an analysis of 50 cases occurring in B——, in which he points out some very remarkable grouping of cases. Thus in X-road there were four deaths occurring respectively at Nos. 3, 4, 6, and 22. At the back of X-road runs Y-street where three cases occurred, two of which were in houses the backs of which adjoined the above-mentioned numbers in X-road. "These houses," Dr. Martin states in his report, "are near those in Z-street, where two other cases had occurred, are all very damp, and are built upon a clay bed; they are some of the oldest houses in B——. Opposite them is a big ditch nearly always containing water and behind this is the churchyard on a level two or three feet above them." Of the Y-street houses he says: "All these houses are damp and always have water in their cellars." In conclusion he says: "The cancer houses occur in groups; nearly all are built on clay; all but one are damp. Part of B—— is built on sandy soil and although houses here are very dirty and the inmates poor they are almost free from cancer." The total cancer mortality for B—— is much below the average, being only 0·3, which fact lends additional weight to these observations. With regard to the town of W——, a street analysis made out by Dr. Martin shows again some remarkable grouping of cases. It is noticed that in no less than six instances have more than one death from malignant disease occurred in the same house during the 10 years and in one instance three deaths. In frequent instances, too, it is found that the cases occur in close proximity. Thus, the cases in T——-street were at Nos. 11, 13, and 17; in M——-street at Nos. 37 and 39; in H——-lane at Nos. 15, 17, 19, and 37; in W——-villas at Nos. 3 and 4, &c.

Dr. A. J. Martin sums up as follows: "The geology of W—— is interesting. The town is built partly on a sand-bed, partly on a clay-bed of varying thickness, overlying a bed of limestone. This clay has in many cases been thrown out into mounds to get at the limestone. Houses have been built upon these clay banks and, speaking generally, these are the houses where cancer occurs. They are all damp, some very much so. They are among the oldest houses in W——. The new houses are almost entirely free. Parts of the town built upon the sand beds are free although in most of these positions the poorest of the inhabitants live crowded together under anything but sanitary conditions. The sand and clay beds are in places sharply defined, a 'cancer area' on the clay bed being likewise sharply defined from an area almost free from cancer contiguous to it on a sand bed." Dr. Martin accompanies his report with a coloured map of W—— in which these facts are represented graphically.

The percentage cancer mortality for the L—— district for 10 years is 0·62. Dr. F. M. Rowland remarks that E——, Ch——, and C—— are the districts with the highest rates—viz., 1·87, 1·5, and 1·52 respectively. The two former are very low-lying, practically on the water, and are subject to floods. The small village of C——, on the contrary, is hilly and high above sea level. It has, however, a stream which, though rapid, some two years ago fell under suspicion of pollution which was supposed to be the cause of the loss of some cattle. The percentage for the neighbouring district of R—— is 0·71, for the town of R—— 0·77, and for the town of A—— 0·79. From interesting reports on the physical conditions in these districts kindly supplied by Dr. W. L. Hubbard and Mr. W. E. Rogers we find that A—— lies between the rivers Trent and Tame and is very flat and low. Water can be reached anywhere at from four to five feet down. The soil is a black sandy peat. The town of R—— lies low and is skirted on one side by the Trent; the meadows close to the river are generally flooded after heavy rain. The soil is a loose washed gravel with line of saturation from 12 feet to 14 feet below the surface. The death-rate of the C—— urban district is 0·35, just half that of the contiguous district of R—— above mentioned. Mr. J. N. Phillips's excellent report gives the geological characters of the district as "generally a gravelly soil of the new red sandstone formation with a mixture here and there of clay beds. The surface consists of a series of undulations sloping gradually down from Castle Ring which is 800 feet above sea level. The surface formation, together with the gravelly subsoil, renders it peculiarly adapted for the efficient filtration of surface waters."

Dr. W. B. Murray in his report of the T——y union says: "The parishes which have the highest rate of mortality for malignant disease are with one exception those which lie in the Teme Valley and on the south bank. The subsoil, I believe, is gravel. The river receives untreated the sewage of L—— and T—— and all the valley is very liable to ground fogs almost nightly. The parishes which are free as a rule lie on higher ground." The percentage mortality for the whole district is 0·89.

It is not possible to give extracts from all the reports received, but the above have been selected as being good instances and as being specially interesting. It has not been forgotten by the Committee that in order to ensure complete accuracy in the statistics upon which they have relied correction should be made for both age and sex incidence. With regard to the latter it does not appear that in any case dealt with so far the figures would have to be materially altered in consequence. With regard to the former, however, such correction would probably raise the proportionate cancer death-rate in most of the centres of industry and lower it in country districts, but it would scarcely affect the figures when two contiguous country districts are compared.

As far as this investigation has at present gone there seems to be a very large balance of opinion in favour of the following conclusions which are also largely borne out by the facts collected by the Committee: (1) the districts in which malignant disease occurs with a frequency much above the average often lie side by side with other districts in which it

[2] The average mortality from malignant disease in England and Wales for the decade 1880-90 was 0·58 per cent.

rarely occurs; and (2) the districts in which malignant disease occur with the greatest frequency are usually ill-drained, low-lying or flat, or border upon streams, while those districts where it is less common are usually higher, drier, and more open, with the possibilities of more rapid drainage of surface waters.

That certain physical conditions influence the prevalence of malignant disease is suggested by the figures published in the Supplement to the Fifty-fifth Annual Report of the Registrar-General, Part I. Here it is seen that the cancer death-rate (uncorrected for age or sex) which averaged in the decade 1881–90 0·58 per 1000 per annum rose in the case of Cambridgeshire to 0·78 and in that of Huntingdon to 0·91 and fell in the cases of Durham, Staffordshire, Lancashire, Derbyshire, and Monmouth to from 0·44 to 0·48. This variation was also noticed in the same counties in the two previous decennia. Dr. Tatham remarks in his excellent comments on these returns: "An examination of the uncorrected cancer rates in the separate registration districts within and around the counties of Huntingdon and Cambridge shows a fairly well-defined area in which cancer would appear to be exceptionally prevalent. This area consists of the districts of Stamford, Bourn, Spalding, and Holbeach in Lincolnshire, Oundle and Peterborough in Northamptonshire, and the entire counties of Huntingdon and Cambridge with the exception of the registration districts of Caxton, Linton, and Newmarket." A glance at the map will show that this particular area is a low-lying piece of land through which slowly meander the various rivers and streams which terminate in the Wash. Mr. Alfred Haviland in a paper published in 1879 says: "The mortality ..... is highest in those districts which skirt the rivers of our country which are seasonally flooded. ..... Throughout England and Wales there does not exist an important river subject to seasonal floodings that does not flow through high mortality districts." He adds that all those districts where cancer does not thrive "are characterised by being high and dry and geologically composed of non-retentive soils—permeable soils and subsoils, in fact."

Dr. W. H. Symons published in the December number of *Public Health* a careful and interesting paper on Cancer in Relation to the Dwelling. After tabulating the cases of malignant disease occurring in the city of Bath for a number of years he comes to the following conclusions: "In Bath there are no 'cancer houses' and I find no evidence that locality has any influence upon the prevalence of malignant disease. The cause of cancer appears as far as this investigation affords information to be generally personal or intrinsic." But it is unnecessary to point out that the problem in Bath with its "large nomadic senile population" is a far more complex one than is the case in country districts or in towns with a more fixed population. This characteristic, while helping to explain the high cancer mortality of Bath, must also greatly increase the difficulty of drawing any correct conclusions from the results of an inquiry into the local incidence of cancer. Whether the character of the immediate subsoil apart from its humidity or perhaps the stagnation or contamination of the water which it contains has any influence on the prevalence of cancer seems at present very doubtful. Some returns point very strongly to a greater prevalence on clay soils, while others again suggest a greater frequency on sand. In this connexion it should not be forgotten that a shallow sand bed overlying clay or other impervious material, a not uncommon condition, may be even more damp and water-logged than where the subsoil is entirely of clay. Again, if the clay is only a thin layer and overlies sand, sandstone, or other porous material, then a much drier condition of subsoil obtains than where the reverse is the case. It also seems more than doubtful if the variations in cancer mortality are in any way dependent on the quality of the water used for drinking or on overcrowding *per se*. What, however, seems almost certain is that there is a direct connexion between the presence of subsoil water within a certain distance of the surface and the prevalence of malignant disease.

It is hoped that the returns for the four counties included in the scope of the present inquiry will be sufficiently complete by next autumn to enable the Committee to present to the Branch a full report dealing as far as possible with each district. The Committee should then be able to add some valuable information to what is already known on this subject, of the importance of which there can be no doubt. The Committee wish to take this opportunity of thanking all those who have been good enough to aid in the work by supplying reports and returns and without whose assistance the work of course could not have been even attempted. In conclusion, the Committee asks permission to continue its investigations for another year with the approval and sanction of the Branch.

THE EMPLOYMENT OF COMPOUNDS OF LEAD IN THE MANUFACTURE OF POTTERY.

"WE have seen admirable examples of printed ware dipped in leadless glaze and it is significant that these results were obtained in trials made upon a manufacturing scale and upon pottery intended to be placed upon the market by leading firms of high reputation." "We have no doubt whatever that leadless glazes of sufficient brilliancy, covering power, and durability, and adapted to all kinds of table, domestic, and sanitary ware, are now within the reach of the manufacturer."—(Professor T. E. THORPE, LL.D., F.R.S., and Professor THOMAS OLIVER, M.D., F.R.C.P. Lond., in a report just printed in the form of a Blue-book and dated Feb. 21st, 1899.)

"We next turn to the possibility of doing away with lead altogether. Obviously could this be done without interfering with the peculiar and delicate requirements of the art of glazing we might confidently hope for a speedy and satisfactory solution of a very difficult question. We now offer the results of some experiments which we ourselves have made with certain leadless glazes in THE LANCET Laboratory." "We consider that these results are of the utmost importance for they indicate the probability of satisfactorily substituting absolutely leadless glaze for the old lead veneer without detriment to the beauty and finished appearance of the product. It seems to us therefore that the ground should be perfectly clear for action by the Home Office. Either leadless glazes are practicable or they are impracticable. It is for a committee of experts to decide one way or the other with the evidence of practical trial before them." "We understand that already some large pottery manufacturers and others with a considerable experience of the industry have tried these leadless glazes on a practical scale with excellent results."—(THE LANCET Analytical Commission on Some Leadless Glazes, THE LANCET, Jan. 7th, 1899, p. 49.)

A more striking and complete confirmation of the views which our Commissioners expressed in these columns nearly two months before the issue of the Government expert' report on the subject than is presented in this first paragraph could hardly have been forthcoming. The Blue-book dated Feb. 21st, 1899, is another evidence of the ability of Professor Thorpe and Professor Oliver to deal with the question of dangerous trades and the means which might be adopted to counteract their evil effects. Last week we dealt with the report of these gentlemen upon phosphorus in the manufacture of matches (they were then aided by Dr. Cunningham who inquired into the dental aspect of the question) and we said that the joint report was a valuable contribution on the subject which should enable the Government so to regulate the manufacture of lucifer matches as to place the great number of workers in this important industry under conditions entirely free from reproach. It was concluded that there need be no phosphorus necrosis, with regulations strictly yet not vexatiously enforced. The report on lead compounds used in pottery manufacture is equally valuable and its import equally clear. Professor Thorpe, as in his previous inquiry, visited several Continental factories and his observations are very instructive, mainly in showing how increased legislative control need not interfere with the interests of the industry. He records further some experiments made in the Government Laboratory upon lead compounds used or proposed for use as substitutes for raw lead in the pottery industry. The conclusions arrived at as the outcome of the entire inquiry are as follows:—

1. That by far the greater amount of earthenware of the class already specified can be glazed without the use of lead in any form. It has been demonstrated without the slightest doubt that the ware so made is in no respects inferior to that coated with lead glaze. There seems no reason, therefore, why in the manufacture of this class of goods the operatives should still continue to be exposed to the evils which the use of lead glaze entails.

2. There are, however, certain branches of the pottery industry in which it would be more difficult to dispense with the use of lead compounds. But there is no reason why in these cases the lead so employed should not be in the form of a fritted double silicate. Such a compound if properly made is but slightly attacked by even strong hydrochloric, acetic, or lactic acid. There can be little doubt that if lead must be used the employment of such a compound silicate if its use could be ensured would greatly diminish the evil of lead poisoning.

3. The use of raw lead as an ingredient of glazing material or as an ingredient of colours which have to be subsequently fired should be absolutely prohibited.

4. As it would be very difficult to ensure that an innocuous lead glaze shall be employed we are of opinion that young persons and women should be excluded from employment as dippers, dippers' assistants, ware cleaners, after-dippers, and gloss-placers in factories where lead glaze is used, and that the adult male dippers, dippers' assistants, ware

cleaners, and gloss-placers should be subjected to systematic medical inspection.

One suggestion in the report is worthy of quotation. It is pointed out that much of the ware supplied to the order of various Government departments, such as the Post Office, the Office of Works, the Admiralty, the War Office, the India Office, &c., could be dipped in leadless glaze without detriment to its character and with no increase to its cost. If in these cases the supply of leadless glaze were insisted upon it would thereby stimulate the more general introduction of pottery free from lead compounds. We congratulate Professor Thorpe and Dr. Oliver in thus appealing to the Government and putting its sincerity to this most excellent practical test.

We said in the report of THE LANCET Commission on Some Leadless Glazes that "it may be hoped that the day is not far distant when the Government will be in a position to demand the abolition of raw lead in glazing and to compel the adoption of safe 'frits' or better still leadless glazes without inflicting any hardship on the potter or causing any hindrance to the pursuit of his art." We submit that the Government is in this position now.

CONTAMINATION OF UNIFORMS IN THE AMERICAN ARMY.

IT is now twenty-one years[1] since we published the report of a Special Commission on the Contamination of Uniforms Provided by the Army Clothing Depôt. From the Army Clothing Depôt and Factory at Pimlico some material for uniforms and underclothing was given out to be made up at the workers' homes. On examining the books of the sanitary authorities our Commissioner found that houses inhabited by the women doing this work had been disinfected because there were cases of small-pox, scarlet fever, &c. On the other hand, by looking over the books at the Army Clothing Depôt it was ascertained that work had been given out to the inhabitants of these houses at the time when infectious disease prevailed in these dwellings. Apart from this proof positive of the risk of contamination many of these houses were visited and information obtained from the inhabitants confirmed the opinion that such home-work was dangerous. This report caused a considerable sensation at the time and a question was asked in the House of Commons on the subject by the late member for Finsbury, Mr. McCullagh Torrens. In view of meeting this difficulty experiments were made at the Army Clothing Depôt on the effect produced on cloth by the process of disinfection. Unfortunately it was then demonstrated that ordinary cloth lost 5 per cent. of its resisting power after it had been disinfected. The test was very simple and the usual one applied to estimate the strength of a piece of cloth. The material is stretched across a form or table and weights added to each end in such a manner as to pull the cloth asunder. As the weights increase the cloth begins to yield and finally it splits in two. It is then only necessary to reckon up the weight required to tear the cloth; and in this manner it was proved that the same piece of cloth gave way with 5 per cent. less weight attached to it after disinfection than it had done before its exposure to dry heat. In those days steam under pressure was but rarely employed for disinfecting purposes. At the same time a curious fact was ascertained; serge was if anything improved by the disinfecting process, but there is comparatively little serge used for uniforms. It should be remarked that there are good reasons for giving out work. It is very desirable to help soldiers' widows who cannot leave their families to work within the walls of the factory but who are able to watch the cooking and the children while working at home. But when disease breaks out among the children or other inhabitants of the same house or tenement these women can ill afford to lose their work so as to avoid the risk of contaminating the clothing which they make up. Therefore, as a certain amount of deception was likely to occur—indeed, we had proved that such deception had occurred—the army authorities thought the safest plan would be to disinfect all clothing made up outside the factory. This plan, however, could not be adopted when it was seen that by so doing the wearing capacity of the clothes would be deteriorated. Consequently the amount of work given to outside workers was reduced to a minimum.

[1] THE LANCET, Feb. 9th, 1878, p. 217.

It would seem that exactly the same problem has attracted the attention of the military authorities in America. The Philadelphia *Evening Telegraph* has just published an account of the difficulties which have occurred at the Schuylkill Arsenal. These were of so serious a nature that on March 1st last a radical change in the management was introduced. A new rule was made forbidding the giving out of work unless the seamstresses showed a certificate from a factory inspector proving that their homes were in a perfect sanitary condition. But there is in this not only a sanitary grievance, it has also an important economic bearing which recalls the arguments contained in our reports and articles on the sweating system. Some time ago Major G. S. Bingham, the commandant in charge of the arsenal, ascertained that some women had, by pleading poverty, obtained trousers to make up for which they were to be paid 75 cents per pair. An inspector called at their homes and discovered that they were not doing any work whatsoever. They had passed the trousers on to a Russian sweater who had undertaken to make them up for the sum of 30 cents per pair. That this can be done and with a profit for the sweater will be readily understood by all who are familiar with the intricacies of the sweating system. But on the other hand and apart from the fraud of obtaining work under false pretences, the question arises—What is likely to be the sanitary condition of the sweating den where by an elaborate sub-division of labour and the employment of starving, underpaid, and unskilled workers trousers are turned out at the low figure of 30 cents per pair? Every year there are from 2000 to 3000 women who apply at the Schuylkill Arsenal for work, and of course it would be gross injustice to conclude that they all hand over such work to sweaters. As far as possible the work from the Schuylkill Arsenal is given out on similar lines to those adopted at the British Army Clothing Depôt at Pimlico—namely, to widows and other deserving persons who have some moral claim upon the Government and the army. In America as in London more than the market wage is paid and the women receiving 75 cents for making up a pair of trousers are able to earn as much as $30, or £7 8*s.* per month, which is a good rate of wages even for America. The fact that the Government pays 75 cents for what a sweater will undertake to do for 30 cents gives the authorities a better right to insist that the work shall be done in wholesome surroundings. From the commencement of the month of March Major Bingham and his subordinates have carefully questioned all the women to whom work has been given and the factory inspectors are busily seeing to the sanitary condition of their homes. This is the right principle. Proper remuneration is the first necessity. It is mere hypocrisy to talk about sanitary homes when the workers cannot earn enough to pay the rent of a sanitary dwelling.

THE ROYAL COMMISSION ON THE METROPOLITAN WATER-SUPPLY.

THE sixtieth sitting of the Royal Commissioners was held at the Guildhall, Westminster, on March 14th. Mr. E. A. Bonnor-Maurice was briefly examined with regard to the present statutory conditions of the control of the metropolitan water companies' undertakings, and he put in a table containing a summary of the main statutory provisions as to control (1) in respect to their obligations to lay mains and provide and supply water throughout their districts; and (2) in respect of the quality and quantity of the water supplied. The latter part of the sitting was occupied by a speech by Lord ROBERT CECIL on behalf of the Hertfordshire County Council; Mr. PEMBER, Q.C., also addressed the Commissioners on behalf of some of the metropolitan water companies, and his speech was continued at the sixty-first and sixty-second sittings which were held on March 20th and 21st.

The sixty-third sitting was held on March 22nd. Mr. POPE, Q.C., spoke on behalf of some of the metropolitan water companies; Mr. LITTLER, Q.C., for the Kent Company; and Mr. BALFOUR BROWNE, Q.C., on behalf of the

project of the London County Council to purchase the companies' undertakings.

The sixty-fourth sitting was held on March 23rd and was occupied entirely by the latter part of the speech of Mr. BALFOUR BROWNE, at the conclusion of which the Commissioners adjourned *sine die* to consider their report.

At the end of the proceedings the CHAIRMAN asked the representatives of the water companies to send a table containing full particulars as to the arrangements of the mains of the companies inside and outside the metropolitan area, in order that they might be able to see what changes would have to be made with regard to the distribution of the water if the undertakings were to be re-arranged so that the county of London and the outlying authorities might each have entire possession of the means of distributing water in their respective districts.

We gave in THE LANCET of March 25th a report of the fifty-eighth sitting of the Royal Commissioners but we were prevented through want of space from giving a summary of the evidence given by Mr. George Corble, clerk to the Lee Conservancy Board. The condition of the River Lee is a matter of such serious import that we have decided to return to the subject.

In answer to the CHAIRMAN Mr. CORBLE said that the clerk to the Lee Conservancy Board was appointed by the whole Board and that he appeared before the Commissioners to represent the views of the Board and was authorised by them to do so. In the course of his evidence the witness said that the upper sources of the Lee were situated near Luton in Bedfordshire, 25 or 30 miles above the town of Hertford, and that a large number of tributary springs joined the river in its course. The history of the Lee Navigation goes back to a very early period, the first Act of Parliament which deals with it having been passed in the year 1424.[1] At the present time the chief trade carried on by the Navigation is in building materials, barley and other cereals, gunpowder and dangerous explosive goods, manure, and gas lime, and about 600,000 tons a year pass over the Navigation, which extends from London to Ware and Hertford and embraces Tottenham, Walthamstow, Edmonton, and Waltham Abbey. The tolls for the year 1890 amounted to £15,577; they, however, vary in amount from year to year. The water companies pay a sum of £3500 and the Conservancy possess real property to the annual value of £1300 a year. They also received last year a sum of £1129 from the water companies. This, the witness said, was a voluntary contribution which they had of late years made to the Conservancy. For five years an extra contribution of £1500 had been made from the New River and East London Companies to the Conservancy, but two years ago they reduced this payment to £1129 odd.

The CHAIRMAN asked why this voluntary contribution was made and the witness replied that in the first place it was made to repay the Conservators for an item, £6000, which they had expended on a lawsuit which they had fought against the town of Hertford about the sewage. The Conservators thought that the water companies ought to contribute towards the expense of this and the water companies had chosen to contribute money in this way. After having contributed to the Conservators the sum of £1500 for five years they now agreed to pay them the sum of £1129 last year.

In answer to Mr. POPE, Q.C., the witness said that there was no agreement as in the case of the Thames Conservancy to allow the water companies to take an increased draught of water from the Lee, and in answer to the CHAIRMAN the witness would not admit that the Conservancy were required to shut their eyes to any extra draught of water in consideration of that payment nor to take less than their statutory navigation quantity. It was a pure gratuity. The Conservators had complained to the water companies "in rather a piteous way" that their funds would bear increasing.

In answer to the CHAIRMAN the witness said that the lawsuit between the Lee Conservancy and the town of Hertford was fought in the year 1886, and that the Conservators failed in their action. Since that time they had been in continual communication with the Local Government Board with regard to the matter.

In answer to Major-General SCOTT the witness said that as a matter of fact nothing had been done with regard to the Hertford sewage. The Conservators had "paused before entering upon another expensive lawsuit."

[1] 2 Hen. VI. The second Act was passed in the following year.

In answer to the CHAIRMAN the witness said that it was the Lee at Hertford which was polluted by the sewage which ran in at a point just below Ware Lock below the intake of the New River Company and about 15 miles above the intake of the East London Company.

The CHAIRMAN asked whether there was no remedy under the Rivers Pollution Act. Lord ROBERT CECIL said that the learned judge before whom the case was tried found that there was no pollution. The witness said that the river was as black as his Lordship's hat and that it could be smelt for a mile off. Lord ROBERT CECIL suggested that such a statement was commonly made by an unsuccessful litigant. The witness replied that the judge had himself made a statement to the same effect, that he had twice visited the place, that he said he was an old fox-hunter and did not require any scientific evidence, and that it was sufficient for him to follow his nose and to follow the line of the river.

The CHAIRMAN asked whether in that case the learned judge had found that there was no pollution of the river and the witness said that that was so.

Mr. POPE suggested that the finding was that there was no pollution within the meaning of the Act and Lord ROBERT CECIL said that he thought that the judge found that the apparent pollution was due to vegetable growth, but Major-General SCOTT said that he had read the judgment very carefully and had not come to that conclusion. The learned judge had said that under the English law there was not that degree of pollution which was indictable.

In answer to the CHAIRMAN the witness said that navigation was not stopped at any time during the year 1898 above Old Ford Lock which is within three miles of London and is the next lock above Limehouse Cut. The witness afterwards qualified this statement by saying that he did not think any barges were stopped for more than an hour or so above this point. Below that point the barges were stopped. The witness explained that they were sometimes stopped in Limehouse Creek owing to exceptional neap tides. The neap tides were, however, not peculiar to the year 1898. Whenever the tides were very low the barges were delayed in Limehouse Cut.

The CHAIRMAN asked whether there was anything peculiar in 1898 which interfered with navigation beyond the circumstances which happened in other years. The witness said that there was no peculiarity but that "perhaps" they were not able to send quite so much water as they were in other years to help the Limehouse Cut. He asserted, however, that complaints were not more frequent in that year than they had been before.

The CHAIRMAN pressed the witness on the point as to whether the fact that the year was an extraordinarily dry one had interfered with the navigation and the witness replied that "it would only have affected it in the Limehouse Cut."

The CHAIRMAN wished to know why this was so, and the witness began by explaining that it was a very peculiar place and required a great deal of understanding.

The CHAIRMAN said that the Commissioners would open their minds to anything which he chose to tell them on the matter. The witness explained that the Limehouse Cut goes from the Thames, is about a mile and a half in length, and that at neap tides the water might be from 18 inches to two feet under head—that is to say, below the level at which it ought to be.

In answer to Major-General SCOTT the witness said it would be impossible to fill up the Cut by passing the full statutory quantity of water down.

The CHAIRMAN asked why this was so, and the witness said that before it could be done the next tide would go out and the Cut would then be reduced to the same condition as it was in before.

The CHAIRMAN again asked why the Limehouse Cut was affected in 1898 more than in other years, and ultimately the witness replied that probably in other years they were able to send down more water down the Navigation.

The CHAIRMAN said that it was, then, because they had failed to send down water from above that the navigation of Limehouse Cut was interfered with in 1898. The witness, however, again spoke of extraordinary neap tides and he thought that one or two of these were exceptionally low last summer.

The CHAIRMAN asked what the difficulty was in getting enough upland water. Was it not that the companies had taken it? The witness said that he could not deny that.

The CHAIRMAN remarked that he did not desire the witness to deny anything which was true, and the witness

admitted that if water was taken above they could not get it below.

The CHAIRMAN said that that appeared then to be the cause of the trouble. Was it not a fact that there was not enough water in the river because it was taken from above? The witness then explained that the Conservators passed down the water by the lockful; they could not, he said, simply open the lock slackers and let the water run right way. They had to pass it "according to Act of Parliament," to measure it lockful by lockful—that is to say, they had to fill the lock, to empty it, and to keep a record, because the water companies could compel them to do so under the Act of 1855, and their books had to be open to the inspection of the water companies.

The CHAIRMAN asked whether if the companies took nothing at all and the full flow of the Lee were allowed to flow down whether the water could not be passed into the Limehouse Cut in time to prevent the inconvenience which the witness admitted the Navigation suffered. The witness replied that the total quantity which they were allowed by their Act to take was 5,400,000 gallons. This he "put at 76 locks," but "really" 77 locks amounted to 5,390,000 gallons.

Lord ROBERT CECIL suggested that it would be useful if the witness would call the attention of the Commissioners to the section of the Act of Parliament which he said imposed obligation on the Conservancy Board to pass down the water in the manner he described and at a later part of the examination pointed out that there was no foundation at all for the statement.

The CHAIRMAN asked what amount of water the Navigation took per day. The witness replied that they "put it at" about 1,800,000 gallons, but that it really amounted to something less than that and that it varied according to the trade. He admitted that this quantity was very much less than they were entitled to take and stated that the average had been even less than the amount he had previously given. It sank as low as 1,261,370 gallons. In answer to further questions he admitted that if they had taken in the 24 hours in the Limehouse Cut the amount of water to which they were entitled he did not think that the navigation would have been incommoded.

The CHAIRMAN asked why they did not take the amount to which they were entitled daily. The witness replied that it might interfere with the navigation, but he afterwards admitted that at other times they had not got that amount of water to pass.

The CHAIRMAN remarked that they had not got it to pass because the water companies had taken it and he asked why they did not pass down the full amount 5,400,000 gallons. He suggested that if the water companies had not taken the water the Lee Conservators would be able to get 5,400,000 gallons a day. The witness said that they were obliged to consider that the East London Company had "to take their quantity."

Mr. MELLOR suggested that a lockful meant a measure or a quantity to fill and empty the locks. The witness finally admitted that the Act had in fact provided for that, but that they had not adopted the provisions with regard to measurement to which they were entitled.

In answer to Mr. DE BOCK PORTER the witness said that he could not disguise the fact that the navigation was hampered by the draught made upon the Lee by the water companies.

In answer to Mr. MELLOR the witness admitted that the navigation was hampered to a considerable extent.

Mr. DE BOCK PORTER said that the relations between the Conservancy and the water companies appeared to be friendly. The witness said "No; we stick to our rights and they stick to theirs."

The CHAIRMAN pointed out that the witness had already confessed that the Conservancy did not stick to their rights, that, on the contrary, they had abandoned their rights and instead of taking 5,400,000 gallons of water they had only taken 1,500,000. The witness replied that the water companies paid them water rents which were a large item of their income.

The CHAIRMAN said that the Lee Conservancy being a body appointed to look after the navigation of the river had sacrificed their interests deliberately for that of the water consumers of East London. The witness said that they could not overlook the Act of 1855.

The CHAIRMAN pointed out that this Act entitled the Lee Conservators to insist on a draught of 5,400,000 gallons a day and that they did not insist on taking this amount. The witness replied that this was a question of policy to a certain extent and that rather than hamper the East London Company they had thought it better to let a few barges be grounded for an hour or two in the Navigation.

The CHAIRMAN pointed out that the witness admitted then that they had sacrificed the navigation of the River Lee to the interests of the water companies. The witness was unwilling to admit that they had sacrificed their interests, but said that they tried to keep the traffic of the Cut in a fair and reasonable way without denuding the water companies.

In answer to the CHAIRMAN the witness said that water was raised last year by the East London Company by means of a pump which they fixed two years ago at Bow and which raised water from the Thames at Bow Creek. The water was taken at a point between Limehouse and Old Ford and the water company also put up temporary pumps to raise the water from pond to pond. (The details of this were given at an earlier sitting by Mr. Bryan, engineer to the East London Company.)

In answer to Mr. DE BOCK PORTER the witness said that there was no understanding between the Conservancy and the water companies that if they did this pumping they would be allowed to take all the water they could get.

Mr. DE BOCK PORTER asked what moved them to pump this water up. The witness replied that the East London Company might have anticipated that if it were not pumped up some of the ponds above would be lowered.

The CHAIRMAN said he supposed the state of affairs to be this. The Lee Conservators went without water which they wanted in order that the water company might be able to supply their customers and the water company pumped water from pond to pond up this Navigation so as just to enable barges to scrape through. The witness admitted that this was the case.

The CHAIRMAN said that it appeared that this arrangement was lubricated by a payment of £1300 a year from the water companies to the Conservancy. The witness said that he did not put it in that way.

The CHAIRMAN said that that was the way in which it struck him at present and asked the witness to state the matter in his own way. It appeared that the Conservancy abstained from taking what they were entitled to out of consideration for the water consumers. The witness said that they thought they ought to consider them.

The CHAIRMAN said that doubtless the views of duty which the witness had were quite right, but what he wanted was to arrive at the fact which it appeared was that the Conservators had abstained from taking what they were entitled to out of consideration for the water consumers. The witness admitted that that was the case.

The CHAIRMAN said that, on the other hand, the companies taking what belonged to the Navigation obligingly pumped water from pond to pond in order to prevent stopping the waterway altogether.

Mr. PEMBER pointed out that under Section 31 of the Lee Navigation Act of 1855 the companies were allowed to pump water from one pond to another.

The CHAIRMAN asked whether the East London Water Company provided any other sources of supply and the witness said that a certain amount was obtained from the Regent's Canal Company by means of Duckett's Canal; the amount thus received was 19,750,000 gallons. This water supplied the pond above Old Ford Lock which was lower than the Regent's Canal. The East London Company paid for this water which was obtained during two days in October and five days in November, 1898.

The CHAIRMAN asked whether arrangements had been made for a permanent supply of water from the Regent's Canal and the witness replied that the Conservancy Board were asking the companies to make the voluntary help they were giving now of a permanent character. This, however, had not yet been done.

The CHAIRMAN pointed out that the Conservators were entitled to keep up the navigation and that the water companies should have their draught if they could. The witness replied that they had to consider the interests of the water companies. They pay the Conservators a certain amount and the Board often said, "Shall we starve East London to keep the barges afloat?"

The CHAIRMAN said he supposed that the barges were not quite so vocal as the East London consumers. The witness said that they were vocal at times when they were stopped.

In answer to Mr. DE BOCK PORTER the witness said that

the Conservators spent £1000 a year in dealing with the pollution in the upper reaches of the river and that that sum was not sufficient for excessive law costs or to pay a very large staff. The witness, however, considered that the condition of the river "as proved by analysis" had become through their exertions very satisfactory.

In answer to the CHAIRMAN the witness said that there had been complaints about the stream at Stratford. There were some very old mill-streams there; the streams were said to be a nuisance and they undoubtedly were so. They were flushed with water which had come from Lee Bridge weir. A nuisance was caused by an effluent from Walthamstow, by an effluent from Leytonstone, and by the sewage from West Ham which goes into Bow Creek. A nuisance was also caused by the London County Council outfall at Bow. There were tide gates at Old Ford and all the back streams mixed at a common level at certain states of the tide.

In answer to Major-General SCOTT the witness said that they had served Walthamstow with a notice with regard to their effluent. Leyton had also applied for an injunction against them and Walthamstow was now under a sequestration order of the Chancery Division of the High Court. The sewage effluent from West Ham, which had a population of from 250,000 to 300,000, goes in at Bow Creek. The West Ham Corporation said that they did not pollute.

In answer to Major-General SCOTT the witness said that the sewage was treated by being placed in black ash waste, but that it was not put on to a sewage farm. In two years' time, however, the West Ham sewers would be connected with the metropolitan system. The Conservancy had been at the expense of dredging in Limehouse Creek because of the deposit which had occurred there. During the last three years they had spent about £1000 in this way and had removed about 10,000 tons of mud. They had also dredged below the London County Council outfall for two or three years and for this work the County Council had hitherto paid, but for some reason they had objected to pay during the present year. The witness understood that the County Council were getting "scientific evidence" and "expert evidence" to say that there was nothing but surface-water coming out to these places, but the witness knew better than that and anyone could see it.

The CHAIRMAN remarked that the Limehouse Cut seemed to be an eligible place for residence with the County Council on one side and West Ham and Stratford on the other.

In answer to the CHAIRMAN the witness said that the East London Company proposed this year to make reservoirs of such capacity that they might be able to send down an extra quantity of water during a drought, using part of their reservoir capacity as a compensation reservoir; but with regard to this help from the East London Company if the Lee Conservators insisted on their legal rights and took the amount of water to which they were duly entitled there would be no need of compensation or help from anyone else.

The CHAIRMAN at a later part of the proceedings remarked that he did not wish to say anything against the integrity and sincerity of the Lee Conservancy Board, but it was obvious that they were dependent on the water companies.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

ELECTION OF PRESIDENT.

AN extraordinary meeting of the Comitia was held on March 27th, Sir SAMUEL WILKS, Bart., President, being in the chair.

On the nomination of the PRESIDENT Mr. Charles Alfred Cripps, Q.C., was elected the standing counsel of the College in the place of Mr. T. T. Bucknill, Q.C., who has been appointed one of Her Majesty's Judges.

A letter was read from the Lord President of the Council asking the College to name a Fellow to represent the United Kingdom at a Congress to be held in Berlin in May to discuss "The Prevention of Tuberculosis as an Endemic Disease." The PRESIDENT nominated Dr. Pye-Smith, who was accepted by the College.

The PRESIDENT then delivered the annual address. He first intimated to the Comitia that he did not desire re-election. He then referred to the principal matters contained in the registrar's report. After detailing the increase or decrease in the number of the Fellows, Members, and Licentiates respectively he mentioned the Royal favours and distinctions which had been granted to Fellows during the past year. He also referred to the gifts to the College, laying special stress on that given by Sir Herman Weber to commemorate his jubilee as a Fellow, and he suggested that the example was an excellent precedent to be adopted by other Fellows. The lecturers then received their due meed of praise. Sir Samuel Wilks also dwelt on the cordiality of feeling which existed between their College and the Royal College of Surgeons of England. A proposal had been made that the College should take immediate steps to attempt to bring about an alteration in the Vaccination Act, but he thought that a year should be allowed to elapse after the passing of the Act so that more facts and statistics might be collected. One of the most important matters which had been before the College was the proposal that the College should relinquish their disciplinary powers over their diplomates, but this proposal had been firmly declined. The President then read obituary notices of the Fellows who had died during the past year, detailing the principal scientific, literary, and clinical achievements of each. The names mentioned were seven in number:—Sir William Jenner, Dr. Munk, Dr. C. J. Hare, Dr. A. A. Kanthack, Dr. Cole (of Bath), Dr. Henry Stevens, and Dr. Arkle.

Sir SAMUEL WILKS then delivered up the insignia of office, thanking the Fellows and more particularly the Treasurer and the Registrar for their loyalty and deference to the chair and for the continuous help which he had received during the period in which he had occupied the position of President.

The election of a President was then proceeded with, the registrar having read the laws which govern the procedure. The following was the result of the first ballot:—Dr. Church, 60 votes; Sir William Broadbent, 56; Dr. Dickinson, eight; Sir R. Douglas Powell, eight; Dr. Hughlings Jackson, three; Dr. Pavy, three; Sir Dyce Duckworth, two; and Sir William Priestley, Sir E. Sieveking, Dr. Pollock, and Dr. Barlow one each. A second ballot was therefore necessary between Dr. Church and Sir William Broadbent, the result being that the former received 77 votes and the latter 67. Dr. Church was therefore declared President of the College for the ensuing year and was installed by the Senior Censor, who delivered to him the insignia of office, and Dr. Church duly "gave his faith" to the College. The latter part of the election and the installation of the President were conducted under some difficulty, the electric light suddenly failing and leaving the Comitia in darkness relieved only by the glimmer of a single lamp.—Dr. CHURCH in a few well-chosen and dignified words thanked the College for the honour which had been conferred upon him.

Some formal business was then proceeded with, the chief item of which was a report from the Midwives Bill Committee. Sir JOHN WILLIAMS proposed, and the SENIOR CENSOR (Dr. Cheadle) seconded, its reception, but discussion on the matter was postponed.

Dr. Corfield and Dr. Poore were deputed to represent the College at the Annual Congress of the Sanitary Institute to be opened at Southampton on August 29th.

The College accepted with acclamation a photo-engraving of the portrait of Dr. James Andrew by Collier (presented by Dr. Church) and one of Dr. Munk (presented by the Treasurer).

The PRESIDENT then dissolved the Comitia.

NEW HOSPITAL FOR TOTNES.—At the meeting of the subscribers of the Totnes (Devon) Cottage Hospital held on March 22nd under the presidency of the Mayor (Dr. G. J. Gibson) the Duke of Somerset's offer of a site for a new hospital at Bridgetown was gratefully accepted, and it was decided to advertise for plans for the new building.

THE LABELLING OF POISONS.—At the Bristol Police-court on March 22nd a druggist was summoned for selling a preparation containing morphia without having a poison label affixed. He had made up suppositories from the prescription of a medical man and as the patient knew how to use them he did not think that a poison label was necessary. The magistrates inflicted a fine of £2 and costs.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On the Sanitary Circumstances and Administration of the Stow-on-the-Wold Rural District, by Dr. R. DEANE SWEETING.[1]—Both these reports concern districts coming under inspection by the Local Government Board on account of official and other complaints of insanitary conditions allowed to persist in them. Dr. Sweeting sets out diverse unsatisfactory conditions which obtain in Stow-on-the-Wold, a rural district midway between Gloucester and Oxford, in area some 12 miles by 11, and with a population of nearly 8000. As in so many agricultural rural districts, the principal sanitary difficulty consists in providing for the larger villages at reasonable cost a sufficient and pure water service and satisfactory means of disposal of sewage and excrement. The agricultural village of Bourton-on-the-Water, for instance, with 254 inhabited houses, lies on the flat and is built upon a superficial layer of gravel overlying an indefinite thickness of impervious lias clay. Most of the houses have good areas of garden ground belonging to them and each gets its water from a shallow well. If excrement and slop water could have been reasonably disposed of on the surface of the garden soil little objection on the score of quantity or of quality would probably need to have been taken to the use of water from wells of this sort. But, thanks to the privy pits, cesspools, and rubble drains, the water of nearly all the wells has long been liable to dangerous pollution, while the prevailing methods of excrement disposal have given rise to nuisance. Remedy has lately been sought by the provision of sewers and by the introduction of water-closets, but, as might have been expected, sewerage by itself has brought little sanitary advantage to the village. There is no water available for flushing the water-closets or for scouring out a series of sewers which are laid at low gradients. The so-called water-closets have become as objectionable as the privies were formerly, and now, however much the quality of the well water may be bettered, it becomes imperative to obtain a public supply under pressure. Unfortunately, the difficulties at Bourton-on-the-Water in obtaining the needed supply at a cost such as is reasonable to incur in the case of villages of this kind seem to be considerable. Dr. Sweeting draws attention to the anomaly in the sanitary administration of the Stow-on-the-Wold rural district presented by the existence of two medical officers of health, neither of whom comes into personal relation with his fellow health officer or with the district council. In view of the experience of other and larger rural areas this arrangement can hardly be justified on the score of the size of the district, and on no other ground can it be considered desirable. It has evidently served as an excuse for the poorness of the salaries—£22 per annum—paid to each officer. Apparently in this district one of the principal qualifications required from a medical officer of health is a convenient reticence. Dr. Sweeting gives an account of an endeavour by the district council to dismiss from office Dr. Corser who in the performance of his duty had called public attention to questions of polluted water-supply.

On the Sanitary Circumstances and Administration of the Borough of Christchurch, South Hants, by Dr. MIVART.[2]—Questions of sewerage, of pollution of rivers, and of water-supply have become important in the ancient borough of Christchurch in Hampshire. It is doubtful whether in the interests of the health of its inhabitants this district ought to continue in its otherwise laudable policy of securing an insignificant district rate and of refusing to incur any debt for public works. Dr. Mivart points out the need of a proper system for disposal of sewage which at present is discharged in crude state into the rivers Stour and Avon or into ditches and watercourses connected with them or with the Christchurch estuary. This need is greater owing to the probability that Christchurch will as years go on have more and more an urban character. The shallow-well water of Christchurch is in many cases unsatisfactory. There is, however, an alternative supply available in the waterworks of the West Hampshire Waterworks Company. But the supply of this company is obtained by pumping from the Avon at a point above Christchurch and there appear to be several opportunities of pollution of this river by sewage at points not far above the intake. Hence the purity of the West Hampshire water depends almost entirely upon the efficiency of the filtration which it undergoes before reaching the consumer. Dr. Mivart gives some account of the method of filtration employed. He points out that it is generally understood that several members of the Christchurch District Council are financially interested in the undertakings of this water company and he recommends the sanitary authority to take independent expert advice on the quality of water thus provided.

[1] London, Eyre and Spottiswoode, East Harding-street; Edinburgh, John Menzies and Co.; Dublin, Hodges, Figgis, and Co.

[2] Ibid.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Harrow Urban District.—Dr. John Fletcher Little expresses the opinion that no milk should be allowed into a district unless the receptacles containing it be sealed and accompanied by a certificate from the medical officer of health of the district in which the milk is produced. We presume that Dr. Little intends to suggest that all cowsheds, cows, &c., shall be under medical and veterinary supervision and not that a medical officer of health shall give a separate certificate with each daily supply. He urges the Harrow District Council to provide public slaughter-houses, to enforce the regulations which they have apparently made under the Dairies, Cowsheds, and Milkshops Order, to apply the tuberculin test, and to make tuberculosis notifiable. The quality of the Colne Valley water was not during 1898 entirely satisfactory and Dr. Little states that at times the water contains matter in suspension. Apparently the water company have not in the past afforded Dr. Little opportunities for collecting samples for analysis.

Swinton and Pendlebury Urban District.—Enteric fever is apparently endemic in the Pendlebury portion of this Lancashire district, and Mr. Samuel Hosegood in commenting upon this fact points out that as from 18 to 20 per cent. of the cases occur among young men who are colliers the disease must often be contracted in the mines through the methods of excrement disposal there adopted. This expression of opinion is of interest and we should much like to see a full inquiry made into the methods of excrement disposal in vogue in coal and other mines. The Medical Department of the Local Government Board might very well undertake such an inquiry.

Aston Manor Urban District.—The sanitary authority of this district has recently procured a site for the erection thereon of a small-pox hospital, and Mr. Francis May, the present medical officer of health, expresses the opinion that the operations of the new Vaccination Act, together with the large number of children who are vaccinated in only one place, will all tend towards the production of severe epidemics of small-pox in the future. He trusts, therefore, that the district council will consider the provision of a small-pox hospital a matter of urgency.

West Hartlepool Urban District.—Dr. S. Gourley reports that the new Vaccination Act has up to the present been productive of harm rather than of good, inasmuch as it has led to a diminution in the number of children vaccinated in this district. 83 parents had been, at the time Dr. Gourley's report was written, granted certificates under the conscience clause of the Vaccination Act. Dr. Gourley thinks that we are at the beginning of a period of panic vaccination and that the so-called "conscientious objectors" will rush to be vaccinated immediately small-pox appears. Let us hope that the Government vaccine laboratory may prove equal to the occasion.

Huddersfield Urban District.—In his report for this district for the last quarter of 1898 Mr. E. G. Annis furnishes an outline of the steps which have been taken for the control of tuberculosis. The veterinary surgeons have been asked to notify to the corporation all cases of tuberculosis occurring either within the borough or in cows supplying milk to the borough, a fee of 1*s.* being paid for each such notification. Where there is doubt as to the nature of the malady in milch cows the tuberculin test is to be applied and a fee of 2*s.* 6*d.* is to be paid to the veterinary surgeon performing the operation. We are told that the veterinary surgeons are

coöperating with the corporation and that many of the cow-keepers are voluntarily submitting their cows to the tuberculin test. Cattle which are found to react to the test are separately housed and sold to the butcher as early as possible.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 33 of the largest English towns 6211 births and 5061 deaths were registered during the week ending March 25th. The annual rate of mortality in these towns which had increased in the five preceding weeks from 19·5 to 23·3 per 1000 declined again last week to 23·1. In London the rate was 23·2 per 1000, while it averaged 23·1 in the 32 provincial towns. The lowest death-rates in these towns were 13·2 in Cardiff, 16·1 in Huddersfield, 17·4 in West Ham, and 18·0 in Bristol; the highest rates were 28·0 in Salford, 29·4 in Wolverhampton, 32·9 in Oldham, and 33·5 in Manchester. The 5061 deaths in these towns included 397 which were referred to the principal zymotic diseases, against 409 and 417 in the two preceding weeks; of these 154 resulted from whooping-cough, 91 from measles, 81 from diphtheria, 31 from diarrhœa, 20 from "fever" (principally enteric), and 20 from scarlet fever. The lowest death-rates from these diseases were recorded in Croydon, Birmingham, Oldham, and Newcastle-upon-Tyne; and the highest rates in West Ham, Plymouth, Derby, and Salford. The greatest mortality from measles occurred in West Ham, Bolton, Manchester, Salford, and Newcastle-upon-Tyne; from scarlet fever in Derby; from whooping-cough in Plymouth, Cardiff, Birkenhead, and Preston; and from "fever" in Wolverhampton. The 81 deaths from diphtheria included 37 in London, eight in Sheffield, seven in Leeds, six in Leicester, and three in Portsmouth. No fatal case of small-pox was registered last week in any of the 33 large towns, and only one case of small-pox was under treatment in the Metropolitan Asylums Hospitals on Saturday last, March 25th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of last week was 2355, against 2584, 2540, and 2437 on the three preceding Saturdays; 177 new cases were admitted during the week, against 236, 217, and 224 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London which had been 529 and 565 in the two preceding weeks, further rose last week to 604, and were 154 above the corrected average. The causes of 62, or 1·2 per cent., of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Bradford, Leeds, and in 14 smaller towns; the largest proportions of uncertified deaths were registered in Swansea, Leicester, Nottingham, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns which had declined in the three preceding weeks from 25·1 to 21·0 per 1000, rose again to 21·8 during the week ending March 25th, but was 1·3 per 1000 below the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 13·5 in Paisley and 16·6 in Dundee to 24·8 in Aberdeen and 27·3 in Greenock. The 666 deaths in these towns included 22 which were referred to whooping-cough, 21 to measles, 12 to diarrhœa, six to scarlet fever, four to "fever," and two to diphtheria. In all, 67 deaths resulted from these principal zymotic diseases, against 67 and 90 in the two preceding weeks. These 67 deaths were equal to an annual rate of 2·2 per 1000, which was 0·4 above the mean rate last week from the same diseases in the 33 large English towns. The fatal cases of whooping-cough which had declined from 31 to 27 in the three preceding weeks, further fell to 22 last week, of which nine occurred in Glasgow, four in Edinburgh, and four in Leith. The 21 deaths referred to measles showed a decline of 13 from the high number in the preceding week, and included seven in Glasgow, six in Edinburgh, and six in Aberdeen. The fatal cases of scarlet fever, which had been five in each of the three preceding weeks, were six last week, of which two occurred in Glasgow and two in Aberdeen. The four deaths referred to different forms of "fever" showed a decline of two from the number recorded in the preceding week, and included two in Glasgow. The deaths from diseases of the respiratory organs in these towns, which had been 172 and 138 in the two preceding weeks, rose again to 151 last week, but were 24 below the number in the corresponding period of last year. The causes of 30, or more than four per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin which had been 28·5 and 32·4 per 1000 in the two preceding weeks declined again to 31·9 during the week ending March 25th. During the past four weeks the rate of mortality in this city has averaged 31·2 per 1000, the rate during the same period being 23·0 in London and 21·5 in Edinburgh. The 214 deaths registered in Dublin during the week under notice were within three of the number in the preceding week, and included eight which were referred to the principal zymotic diseases, against numbers declining from 17 to 12 in the three preceding weeks; of these, four resulted from "fever," two from whooping-cough, one from diphtheria, and one from diarrhœa, but not one from small-pox, measles, or scarlet fever. These eight deaths were equal to an annual rate of 1·2 per 1000, the zymotic death-rate during the same period being 2·1 in London and 2·4 in Edinburgh. The fatal cases of whooping-cough which had been five and 10 in the two preceding weeks declined again to two last week. The mortality from diphtheria showed a decline from that recorded in the preceding week, while that from "fever" showed an increase. The 214 deaths in Dublin last week included 39 of infants under one year of age and 60 of persons aged upwards of 60 years; the deaths both of infants and of elderly persons slightly exceeded the numbers recorded in the preceding week. Nine inquest cases and seven deaths from violence were registered; and 74, or rather more than a third, of the deaths occurred in public institutions. The causes of 13, or more than six per cent. of the deaths in the city last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

FLEET SURGEON JOHN BELLHOUSE BOWDEN TRIGGS has been placed on the Retired List of his rank at his own request.

ROYAL ARMY MEDICAL CORPS.

The following officers embark for England in the transport *Simla*: Majors A. H. Keogh, W. C. T. Poole, and C. H. Melville, and Captains E. M. Pilcher and N. Tyacke. Major B. M. Skinner has joined for duty in the Home District. Majors J. S. Davidson and E. Butt and Lieutenant J. Cowan have embarked for India.

INDIA AND THE INDIAN MEDICAL SERVICES.

The following officers on arrival from England have been posted as follows: Lieutenants H. G. Martin, R.A.M.C., and F. F. Carroll, R.A.M.C., to the Mhow District, and Lieutenant N. H. Ross, R.A.M.C., to the Poona District.

THE CAMPAIGN IN UGANDA.

We have received the following particulars of the operations in Uganda in a letter from a correspondent serving in that country. The date of the letter is Dec. 20th, 1898.

The mutiny of the Soudanese troops in Uganda, for the suppression of which the 27th Bombay Light Infantry (1st Balooch Battalion) was sent from India at the beginning of 1898, is drawing to a close. The campaign has been a lengthened one owing to the huge tract of country over which operations had to be carried out, to the density of the jungle which effectually hides a flying enemy only a few hundred yards away, and to the difficulty of manœuvring in the swampy country during the rainy season. The principal engagements in which the 27th Bombay Light Infantry have taken part are as follows:—

Mruli, April 26th.—Attack on mutineers' fort on the east bank of the Nile. British loss: 43 killed and wounded, of whom the 27th Bombay Light Infantry lost five killed and 13 wounded. Enemy's loss: unknown. The fort was rushed and burnt and the British force had to return as darkness came on. In this engagement Captain Standage, I.M.S., distinguished himself by twice carrying back wounded men and

by his attention to the wounded under fire. His services were mentioned in despatches to India.

Jaruba, August 4th.—Attack on and capture of the mutineers' fort. British loss: two killed and five wounded. Enemy's loss: 75 killed; wounded unknown. Major Price acted most gallantly in the night attack on a hill picket. With only two sepoys to support him he rushed into the midst of the enemy, shooting down six with his own hand.

Kitabu, Oct. 10th.—British loss: 13 killed and nine wounded. Enemy's loss: over 50 killed; the wounded were carried away. The enemy, numbering about 400, surprised a small party of 30 under Lieutenant Hannyngton. Lieutenant Hannyngton was wounded in two places and had marks of four bullets on his clothes.

Nakitoma, Oct. 27th.—British loss: two killed and four wounded. Enemy's loss: 150 killed and wounded, many of whom were Uganda allies of the mutineers. The enemy was attacked in a fort but ran from it.

Kijingute, Nov. 25th.—British loss: *nil*. Enemy's loss: small. They ran when firing began. After this engagement a lot of prisoners were taken and about 40 men gave themselves up. On Dec. 6th Bilalamin Effendi, the leader of the mutineers, was killed by a sepoy of the 27th Bombay Light Infantry. It is probable that many more mutineers will now give themselves up. The supply of chloroform, drugs, antiseptics, and medical comforts is sufficient, and all the sick and wounded have done well, though the transport to Kampala, the base in Uganda, is effected entirely by coolies and is none too comfortable. A terrible loss was sustained by the burning of all the hospital drugs and stores. They were struck by lightning on Sept. 1st; but fortunately the reserve stores were close up on the road from Mombasa and though the field equipment is missing there is a sufficiency of all requirements. A large number of the wounds were made by Lee-Metford solid bullets and our medical officers' experience of bullet wounds has been increased by large numbers of the enemy's wounded brought into hospital. The medical officers with the force are Major S. T. Avetoom, I.M.S., S.M.O., and in charge of the 27th Bombay Light Infantry; and Captain R. F. Standage, I.M.S., in charge of No. 46 C. Native Field Hospital, with a large staff of hospital assistants.

THE LATE ADMIRAL SIR WILLIAM MENDS, G.C.B.

The late Sir William Mends, in addition to having held many important posts in the navy and having greatly distinguished himself on several occasions by his enterprising pluck, was a good friend of the medical departments of the navy and army. His son who was a naval medical officer but who retired in 1894 has just published his father's memoirs. The late Sir William Mends was for a long time Director of Transports and he organised the Indian troop service system which continued in operation for a good many years, but which has now been replaced by another service. He gave most effectual aid to the Army Medical Service in fitting out hospital ships for various expeditions, especially in the case of the *Victor Emmanuel* for the Ashanti Expedition under Sir Garnet (now Lord) Wolseley. The late Professor Parkes declared at the time that it was the best hospital ship which had ever been sent out from this or any other country.

DEATHS IN THE SERVICES.

Surgeon-Major-General William Marshall Webb (retired), at Cairo on March 18th at the age of 65 years. The late officer was, it will be remembered, for some years stationed at Netley and did much service in connexion with the hospital and the Army Medical School there. He subsequently served as Principal Medical Officer at Bombay. He was a son of the late Captain J. W. Webb, 79th Highlanders. He served with the 19th Regiment throughout the Crimean campaign and was present at the battles of Alma and of Inkerman, and also at the siege of Sebastopol (medal and three clasps and the Turkish medal). He became Surgeon in 1864, Surgeon-Major in 1873, Brigade-Surgeon in 1879, Deputy Surgeon-General in 1881, Surgeon-Major-General in 1887, and was placed on the Retired List in July, 1893.

READING MATTER FOR SICK SOLDIERS.

The following letter has been published in the press:—

"I hope you will allow me to ask those of your readers who may be interested in the British soldier to kindly send newspapers, periodicals, &c., for the use of the sick and convalescent soldiers in the Station Hospital at Meean Meer, Punjab. The soldiers fully appreciate anything done in this way for their recreation and benefit, and I shall be glad if these could be sent from time to time addressed to me.

"I am, Sir, your obedient servant,

"W. B. MILLER, M.D.,

"Lieutenant-Colonel, Royal Army Medical Corps.

"Meean Meer, Punjab, March 8th."

THE INCREASE OF THE NAVY.

The increase of the navy will of course entail a considerable augmentation in the way of wages, victualling, hospital establishments, and so forth. The additions to the lists of medical officers and other branches of the naval service are to be made gradually. The Naval Medical Service appears to be a popular one. It may have some grievances, but everything is relative in this world and naval medical officers generally are contented with their service and position.

Sir H. F. Norbury, K.C.B., Director-General of the Medical Department of the Royal Navy, has visited the *St. Vincent* (training ship for boys) at Portsmouth in reference to the outbreak of influenza in the ship. On the same occasion he went to Haslar to see the boys who have been removed to hospital.

Correspondence.

"Audi alteram partem."

"CERTAIN ORGANISMS ISOLATED FROM CANCER AND THEIR PATHOGENIC EFFECTS UPON ANIMALS."

To the Editors of THE LANCET.

SIRS,—Mr. H. G. Plimmer in summing up an account of his experiments on the above subject[1] says that the important point of his work is "the experimental production of malignant tumours in animals by an organism isolated from a malignant tumour in man." May I be allowed to point out that Mr. Plimmer does not prove in his paper that malignant tumours have been so produced? He asserts that he has obtained pure cultures of "parasites standing in causal relationship" to cancer. Of nine experiments recorded in proof of this statement four showed no result; in two cases the animals died, pure cultures of the "organisms" were obtained from various tissues, and it is not stated whether tumours were found or not.

In two cases cultures were injected into the peritoneal cavities of guinea-pigs. Death followed after 20 days and 17½ days respectively. In each case numerous new growths were found in the peritoneum and other parts and the abdominal glands were enlarged. There is, however, no assertion that the new growths were carcinomatous or malignant until the writer sums up his conclusions. Sections showed "new growths of an endothelial nature." These two experiments seem to me to have little or no value as proofs of Mr. Plimmer's contention without a full description of the macroscopic and microscopic characters of the tumours induced and his conclusion above quoted does not seem to be justified unless experts in microscopy agree that these tumours are malignant.

In experiment No. 4, both corneæ of a rabbit were scraped and the "sediment of a 10 days old culture" was rubbed over them. The rabbit was killed 48 hours later and Mr. Plimmer records that "there was considerable proliferation of the corneal epithelium which had forced its way into the subjacent tissue. The organisms were found in the epithelial cells after fixing and staining, with appearances similar to those of the inclusions in cancer cells, as described by Ruffer and myself." At the end of his paper Mr. Plimmer refers to "tumours" being produced, "so far, with one exception, of endothelial origin," and he says that "No. 4 (the corneal experiment) is the only one in which an epithelial surface was tried." When an investigator professes to recognise tumour growth in the cornea of a rabbit killed 48 hours after the cornea had been scraped and rubbed with a culture which the experimenter believes to be capable of inducing cancer I submit that the conclusions arrived at and all the evidence adduced should be examined with the greatest care. It seems to me unjustifiable to assert

[1] THE LANCET, March 25th, 1899.

positively that there was or was not a malignant development in the corneæ under the circumstances stated in experiment No. 4. Mr. Plimmer's two cases of tumour formation in the peritoneum and elsewhere would seem to me to prove his case if the developments which he calls "tumours" were shown to be malignant, but unless there are much better reasons for so describing them than there are for asserting that tumour growth existed in the corneæ in case No. 4, the evidence brought forward in THE LANCET forms no logical basis for the conclusion arrived at. No reasons for believing these tumours to be malignant are given. The presence of bodies which in Mr. Plimmer's opinion are parasitic does not prove his thesis unless he can show beyond dispute that malignant tumours were also developed.

There is no doubt that the corneæ in case No. 4 were very greatly irritated. In the first of the experiments in which peritoneal "tumours" were induced (case No. 8) "10 cubic centimetres of a three weeks old culture" were injected. The origin of the cultures used in these two cases is not more particularly stated. In the second case in which peritoneal "tumours" were induced (No. 9) a culture was used from the abdominal glands of a guinea-pig (Case No. 8) which had died 20 days after being experimented on. It is important to know whether the culture used in each case was made from a body which had died from disease or from a freshly removed tumour, but this information is wanting. It seems to me that Mr. Plimmer has not only omitted to give sufficient evidence to prove the conclusion which he confidently adopts, but he has also failed to defend himself from the obvious suggestion that the phenomena he observed were of inflammatory origin.

I am, Sirs, yours faithfully,

Portman-street, W., March 25th, 1899. JOHN D. MALCOLM.

LOCK HOSPITALS AND LOCK WARDS.

To the Editors of THE LANCET.

SIRS,—The matter referred to in the annotation in THE LANCET of Feb. 25th and in the letter of your Liverpool correspondent in THE LANCET of March 4th respecting the closing of the local lock hospital is only a part of a very wide question. That venereal diseases ought to be both studied and treated goes without saying; that men, women, and children infected with syphilis through no fault of their own are deserving of charity is equally clear. And yet it was calmly proposed to close one of the only six lock hospitals in the United Kingdom and it has been closed. It may, perhaps, assist in explaining the reason which has led to this if those who are in a position to do so will explain the following facts. There were formerly beds for females suffering from venereal diseases in the following six metropolitan hospitals to the number given against each: Guy's, 30; King's College, 6; Royal Free, 30; St. Bartholomew's, 50; St. Thomas's, 30; and Middlesex, 8; or six lock wards containing 154 beds for females only. Those of Guy's, King's College, and Royal Free Hospitals have all been closed as lock wards and are, I presume, occupied by medical or surgical cases. The 50 beds in St. Bartholomew's Hospital have been reduced to 14, those in St. Thomas's Hospital to 28, and those in the Middlesex Hospital from eight to seven. So far as I am aware there are no lock wards in the Charing Cross, St. George's, St. Mary's, University College, or Westminster Hospitals. The London Hospital has a lock ward with eight beds for females. During the years which have passed since these changes were made the population of London has continued to increase to such an extent that London and Middlesex will soon be coterminous. From what appears in THE LANCET and other medical papers it is manifest that syphilitic and other venereal diseases are not diminishing either in frequency or in severity, while to judge from the daily papers the social evil is in some localities more rampant and aggressive than it has ever been.

The sensation caused by the description of those soldiers who were sent to Netley Hospital from India invalided for syphilis has not passed away and it is an open secret that the present Government will be petitioned to appoint a Royal Commission or Select Committee to inquire into the prevalence of these diseases with a view to their prevention. Should the petition be granted the facilities for treating these diseases must become part of the reference and what a revelation it will be. In this year 1899 the only Liverpool hospital for the reception of these diseases has been closed. In London the Female Lock Hospital has two wards containing 40 beds closed for want of funds. In addition to this there are 57 beds for women in the four hospitals—St. Bartholomew's, St. Thomas's, the London, and Middlesex. Who are to be blamed—the members of the medical profession, the managers of the hospitals, the general public, or all three? Is it another illustration of the old saying, "What is everybody's business is nobody's business"? There are, it is true, facilities for the treatment of these diseases in the out-patient departments of the Lock Hospital in Dean-street, Soho, and in all the general hospitals. The experience gained there by students under a capable teacher is most valuable. But the outdoor treatment of such cases is too often most unsatisfactory and there are some cases which can only be properly treated as in-patients. For these there should in such a city as London be ample accommodation in the lock hospitals of Dean-street and Harrow-road and in every one of the 12 general hospitals. The difficulties of establishing and supporting special lock hospitals are so insuperable that lock wards as part of general hospitals are preferable. They should be under the charge of special surgeons who should give clinical lectures which students should be required to attend. All the existing lock hospitals should be strengthened by more liberal support and in all cities and towns where there is no lock hospital a lock ward should be opened in the county town or city. I trust that those readers of THE LANCET whose experience is greater than mine will support me.

I am, Sirs, yours faithfully,

Liverpool, March 20th, 1899. FRED. W. LOWNDES.

"A CASE OF TUBAL GESTATION WITH RUPTURE AND FATAL HÆMORRHAGE AT A VERY EARLY PERIOD OF PREGNANCY."

To the Editors of THE LANCET.

SIRS,—The case recorded by Dr. Lucas Benham in THE LANCET of March 25th is one of very great interest and is a very good example of the early rupture of a tubal gestation which Mr. J. W. Taylor especially called attention to in his Ingleby Lectures of last year.

The condition would appear to be commoner than is generally supposed and Mr. Taylor records a number of cases of the kind. A specimen which must bear a very close resemblance to that of Dr. Benham's is in the museum of University College. It consists of the uterus and appendages of a young woman who is said to have menstruated three weeks previously; the right Fallopian tube at about one inch from its abdominal end is dilated into a small cyst half an inch in diameter, forming the sac of a ruptured tubal gestation. The patient, an unmarried nullipara, died from hæmorrhage within a few hours. It would be interesting to know if the condition of atrophy of the tube which Mr. Taylor is inclined to regard as the cause of the early rupture is present in Dr. Benham's specimen or not.

I am, Sirs, yours faithfully,

Wimpole-street, W., March 28th, 1899. G. F. BLACKER.

"THE DIASTOLIC MURMUR OF MITRAL STENOSIS."

To the Editors of THE LANCET.

SIRS,—Dr. Bertram Hunt's article on the above subject in THE LANCET of March 25th is of much interest and though the conclusions which he draws will demand more extensive clinical evidence for their establishment yet they will, I think, commend themselves to the experience of many who have interested themselves in the murmurs of mitral constriction. One or two points I would accentuate. In the first place I quite agree with Dr. Hunt when he says that the early diastolic murmur of mitral stenosis is always preceded by a systolic bruit and that in this fact of the invariable systolic accompaniment it contrasts with the presystolic murmur. This, however, is a matter of observation pure and simple and it remains to be seen whether the statement will hold without exception. Next, as to the mode of origin of this murmur, he gives the simplest and as I believe the correct explanation of the manifestation. Dr. Hunt puts this so very briefly that perhaps I may be excused for dwelling further upon it. Before the occurrence

of regurgitation the rise in the intra-auricular pressure will go on increasing up to the moment of the relaxation of the ventricle. At that moment the auricle will begin to unload itself across the constricted valve, but the driving force being no greater than the pulmonary vein pressure this in a majority of cases will be insufficient to produce an audible bruit and for the development of a murmur we have to wait till the auricular constriction adds the necessary impulsion. When, however, mitral regurgitation sets in the auricle fills both from the pulmonary veins and from the left ventricle. The distending force of the ventricular systole will greatly exceed that of the pulmonary veins and the result will be such a filling and stretching of the auricle that when the ventricular diastole sets in the elastic recoil will, as Dr. Hunt says, suffice to drive the blood back into the ventricle with a sound. This early diastolic bruit will thus be the exact counterpart in a sense of the early diastolic aortic bruit, the cause of which is the stretched aorta. I have always been accustomed to contrast the early diastolic bruit of mitral constriction with the presystolic bruit—as, the one a bruit of physical origin, viz., of elastic recoil, the other a bruit of physiological origin, viz., muscular contraction. I am very glad to see that Dr. Hunt does not invoke the aid of that very embarrassing gift of the physiologists, the negative pressure in the expanding ventricle. This aid to the circulation is there, I suppose, to assist the ventricle; but as a matter of fact if it exist it will have been generated by the ventricular contraction and by it alone. But why this heresy, Dr. Hunt neither invokes nor provokes it.

I am, Sirs, yours faithfully,

HARRINGTON SAINSBURY.

Welbeck-street, W., March 27th, 1899.

ERYTHROL TETRANITRATE.

To the Editors of THE LANCET.

SIRS,—An accident by which a chemist lost his life happened at a tabloid factory at Dartford on Dec. 15th, 1897. He was engaged in mixing tetranitrate of erythrol with finely powdered lactose in a mortar when an explosion occurred. Again, at the end of 1898 an accident was caused by tetranitrate of erythrol being inadvertently thrown into a fire and one person was injured. Tetranitrate of erythrol is possessed of explosive properties and is highly sensitive, more so, indeed, to percussion than dynamite or gun-cotton. As it has lately come into some use in the place of nitroglycerine as a remedy for angina pectoris I should be glad if you would draw special attention in THE LANCET to the dangers attending the handling of this drug.

I am, Sirs, yours faithfully,

A. FORD,

Colonel; Her Majesty's Chief Inspector of Explosives.

Home Office, Whitehall, S.W., March 24th, 1899.

"DIFFICULTIES UNDER THE NEW VACCINATION ACT."

To the Editors of THE LANCET.

SIRS,—In face of the ever-increasing difficulties and the invidious criticism which confront the justice or magistrate whenever he has judged it right to refuse an exemption certificate in accordance with the discretionary power vested in him by the so-called "conscience clause," might it not be possible to provide every magistrate with a well-considered formulary of test questions whereby he could practically sift the worth or worthlessness of each applicant's *conscientious* objections? Would it not be expedient during the time the Act remains in force for the medical profession to frame such a schedule of test questions for the use of magistrates in examining the validity of exemption claims? Medical opinion is so solid as regards both the efficacy and safety of vaccination that it surely would be possible so to frame a formulary of non-technical test questions to be asked of each applicant as to disprove the alleged ill-effects following vaccination and at the same time convince by demonstrable evidence the magistrate—and perchance even the applicant—that the objections raised could not be substantiated when subjected to expert investigation; that is to say, expert so far as the magistrate would then be enabled to review the probabilities and possibilities of given statements by the light of medical opinion. Such a course would vastly relieve the magistrate of the onerous task imposed upon him and would serve greatly to remove the mistrust provoked in the public mind by the hirelings of the Anti-Vaccination League.

I am, Sirs, yours faithfully,

Windsor, March 25th, 1899. W. LISLE GOODRIDGE.

To the Editors of THE LANCET.

SIRS,—The ventilation of this subject in your columns and at meetings of medical societies seems to have brought out the fact that we have in the New Vaccination Act increased powers to secure the efficient vaccination of most of the babies born this year and henceforward. With the public vaccinator, bound to make four insertions and to obtain a minimum scar area, and the vaccination officer, unhampered by a board of guardians, behind us we should be able to persuade most parents (*pace* "P. P.") to let us do our duty to the public by vaccinating their children properly before they are four months old. At the last meeting of the Plaistow Medical Society, after an account of the new Act had been given by the public vaccinator for the district, the following resolution was passed: "That vaccination should be performed with calf lymph and that not less than three insertions should be made."

This is only a pious opinion and does not set a very high standard, but, considering that the "one-small-place-for-a-shilling" game (to call it by no worse name) has so often and so recently been played here and that vaccination reform must spring from, and be fostered by, the medical profession, it is at least an apology, an appeal, and a challenge.

I am, Sirs, yours faithfully,

HON. SEC. PLAISTOW MEDICAL SOCIETY.

March 27th, 1899.

To the Editors of THE LANCET.

SIRS,—In reply to Mr. Blaker I never said "I considered it offensive, undignified, unprofessional, or irksome to arrange with my own patient for vaccinating his child." He leaves out the very important words "without being sent for or consulted," which is a very different matter. On the contrary, should the parent call or send for me I should be very happy to arrange it. I repeat it is no part of my duty to call unasked to vaccinate and would also be every one of the adjectives he quotes. Some patients are never seen from one confinement to another, another medical man, perhaps, attending for sickness; some may take an aversion to their accoucheur and vow they will never have him again; some may avail themselves of the services of the public vaccinator for economy's sake; the babies of a fourth series might not be very well at the time of the visit but not thought sufficiently ill to call in a medical man; a fifth series may object to vaccination. Supposing one did call, the visit, being paid, may necessitate several others, say, in postponement, as if you accept responsibility in the one you must do so in the other. All these visits have to be charged for; that being so, I repeat that one might be taxed with touting, especially by the parents of the first three or the medical men whose services are substituted. Your correspondent "Fairplay" not succeeding in proving his assertion as to the private attendant's obligation to carry out the law, shifts his ground and questions if it is not always the duty of the medical attendant to safeguard his patient. I sometimes hear from outsiders that the children of patients of mine are ill with measles, scarlet fever, &c., and that the parents are doing without medical attendance. I do not consider it my duty to call and warn them of the risk and "offer my services" to safeguard the case. Our own patients are only our patients when they request our services and then only our responsibility begins; till that time they are free agents with their own responsibilities, being never at any time our property. This very new duty as laid down by your two correspondents will not, I think, be accepted by family practitioners. If we began to do so our reception in time might rival that of "P. V." in your issue of Feb. 18th and our "self-importance" (self-respect is a better word) suffer. Both your correspondents have taken up a perfectly untenable position, but, seeing that public vaccinators are likely to find a Scylla, advocate a line of practice to private practitioners where they would probably find a Charybdis. I may say that this new version of our duty seems to have extended itself to vaccination officers. I received to my surprise the other day per post the certificate of a child whose vaccination I had postponed, the time being up to the day. I need hardly say I sent it back to him to see after himself.

I am, Sirs, yours faithfully,

March 25th, 1899. GENERAL PRACTITIONER.

"INTRAVENOUS INJECTIONS IN SYPHILIS."

To the Editors of THE LANCET.

SIRS,—Mr. Chopping's answer[1] to my letter in THE LANCET of March 4th does not appear to me to be complete. This may be due to my objections to the intravenous treatment not having been put clearly enough. My contentions are as follow: 1. The intravenous injection of mercury has not been proved to have any advantage over other methods as regards either rapidity of disappearance of symptoms or convenience. 2. It is obvious that in private practice it is almost impossible to carry it out even if the patient consented—which is very doubtful. 3. Mr. Chopping says in his letter that "we are only able to judge of effect by quantity administered" and hence "it is very important to know if possible the exact quantity of mercury introduced into the circulation." In answer to this I would venture to state that if symptoms of mercurialisation were the same in all individuals, such measurement of the dose administered would be scientific. But, as we know very well, there are very great differences in the way different persons react to mercury, and our only guides in its administration are the symptoms produced, together with the rapidity of disappearance of syphilitic lesions. The same dose of mercury administered in whatever way will not cause the same effect in all patients, and therefore I consider the exact dosage to be of minor importance.

I am, Sirs, yours faithfully,

Finsbury-square, E.C., March 24th, 1899. C. F. MARSHALL.

PUERPERAL FEVER AND NOTIFICATION.

To the Editors of THE LANCET.

SIRS,—The enclosed slip has been issued to all medical practitioners in this city, and is now attached to all books of notification forms issued—as a help in deciding the meaning of the term "puerperal fever" for notification purposes.

I am, Sirs, yours faithfully,

D. S. DAVIES,
Medical Officer of Health.

Public Health Department, Prince-street, Bristol,
March 27th, 1899.

[INCLOSURE.]

CITY OF BRISTOL.

THE INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889.

Puerperal Fever.

A Committee of the Royal College of Physicians of London has recently endorsed the view that the expression "puerperal fever" should be taken to include "septicæmia, pyæmia, septic peritonitis, septic metritis, and other acute septic inflammations in the pelvis, occurring as the direct result of childbirth."

The Council of the Obstetrical Society of London suggests the following inclusive definition of the term "puerperal fever." That is: "Septicæmia and pyæmia, including peritonitis and all cases of acute pelvic inflammation occurring in connexion with childbirth."

Issued for the information of medical practitioners.

D. S. DAVIES, M.D.,
Medical Officer of Health.

Public Health Offices, 40, Prince-street, March, 1899.

"THE HEALTHIEST CITY IN THE WORLD."

To the Editors of THE LANCET.

SIRS,—Englishmen are apt to believe that there is no place like England for the English people and that when the race is propagated outside the English shores it degenerates. Now the English race has ousted the aboriginals and has taken possession of Tasmania for just about a century and a great part of our people are native-born from British parents, yet I throw down the challenge to those who hold the above views to beat the following figures. The population of Hobart and its suburbs is 40,500. During the last year 561 people died, or about 14 per 1000, but of this number 385 were over 65 years of age, or 9·50 per 1000 of the total deaths, which leaves only 4·50 per 1000 for deaths from all other causes—such as infancy, accidents, &c. As an officer of health for one of the suburbs I take a great interest in these figures and would like to hear if they can be beaten by any other British town. Especially my challenge is upon only 4·50 deaths per 1000 under 65 years of age. *En passant* we have no system of deep drainage, excreta being removed once a week in pans.

I am, Sirs, yours faithfully,

Hobart, Feb. 16th, 1899. HARRY BENJAFIELD, M.B.

[1] THE LANCET, March 18th, 1899, p. 796.

THE WOUNDED DERVISHES AT OMDURMAN.

To the Editors of THE LANCET.

SIRS,—As it is impossible to reply to assertions made in the lay press will you allow me, as one who passed over the battle-field immediately in the rear of the British troops after both engagements, to contradict most emphatically the assertion that no aid was given by our medical officers to the wounded Dervishes? As far as we were able during the brief halts which took place on our march into Omdurman every assistance that could possibly be given with due regard to the needs of our own men was freely rendered by my field hospital and by the medical officers who were in charge of the stretcher-bearers and camel cacolèts. Whenever we halted for any space of time and none of our own people claimed our attention my men were constantly giving water and extemporising dressings (often at great personal risk) to the many wounded Dervishes who lay about. Moving slowly, as we were compelled to do, having so many stretcher cases to take into Omdurman, I had the fullest opportunities of seeing the behaviour of the Egyptian native servants and saises towards the wounded, and only on one occasion did I see anything approaching "harsh" treatment adopted towards the wounded, and that was when a Dervish deliberately hurled a spear at an officer of the Royal Army Medical Corps who had been a moment before giving him water.

I am, Sirs, yours faithfully,

M.O. IN CHARGE OF No. 1 FIELD HOSPITAL.

March 27th, 1899.

VACCINATION AND SMALL-POX IN RANGOON.

To the Editors of THE LANCET.

SIRS,—Appended you will find an extract from a letter from my brother in Rangoon which may interest you. It is about the epidemic of small-pox at present raging in Rangoon: "I wish some of your conscientious objectors at home were here during the present epidemic to see the effects of vaccination. Not a living soul in Rangoon who has been vaccinated comparatively recently—say, within the past five or seven years—has had anything worse than a very mild attack, while dozens are dying every day from it; and yet lunatics at home resist vaccination. I have had much trouble with our men, many of whom refused to be vaccinated, so one day I made arrangements with the medical man and when he came I locked the doors and saw that every man unprotected either by recent vaccination or by inoculation (the desperate native method) had to choose between vaccination or dismissal. It is tyranny, of course, but see the result. We have over 150 men and with small-pox raging all round not one of them has taken it. I wish all the anti-vaccinationists of the country had been in Rangoon for the past month. Those who had not been converted promptly, would soon have had their toes to the daisies."

I am, Sirs, yours faithfully,

March 25th, 1899. T. McC.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

A Solution of the Question of Mixed Races.—The Progress of the Plague.—The Steam Bath Treatment for Plague.—The Government and Scientific Experiments.—The Plague Commission.

ALTHOUGH the Eurasian question is not a medical one it is of perennial interest to all Anglo-Indians. Whatever we may think of the coarse methods and crude civilisation of the advanced guards of Russian colonisation we must admit that their solution of the question of mixed races is politically, at any rate, a most diplomatic one. It is said that half-breeds are recognised as Russians, and once Russians their descendants of whatever degree are Russians also. It follows, therefore, that colonisation progresses and becomes founded on a sure and substantial basis. In most parts of the world half-castes are recognised as loyal to their superior caste authority. Instead therefore of doing everything to alienate them, looking down upon them, and belittling them on every possible occasion, the Russian raises all those who have Russian blood in them

to the position and privileges of Russians. The pure-blooded seem to be devoid of that absurd prejudice which reigns in India and the West Indies on this question. This difference of treatment must surely produce very important results at some future date. On the other hand, it is argued that the difference of results accounts for the difference of treatment. It is said that the cross between the East Indian and the European is less satisfactory than that of the European with the negro and that both are very far inferior to the product of a mixture of Turanian and European blood. These differences are doubtless of vast importance. One would naturally imagine that those possessing in any degree the blood of the ruling race would, other things being equal, have some political or social privileges over those of the subject race. It is not so, however, in India and herein lies a grievance which time and progress do not seem in any way to have lessened.

The weekly report on the progress of the plague is very unsatisfactory. I give the Bombay Presidency plague mortality.

Cases of Plague and Deaths therefrom reported to the Government during the week ending Feb. 24th.

Cities.	Cases.	Deaths.
Bombay	942 ...	891*
Karachi	16 ...	8
Poona	37 ...	30
Districts.		
Ahmedabad ...	1 ...	1
Panch Mahals ...	101 ...	68
Kaira	92 ...	81
Broach	79 ...	68
Surat	12 ...	11
Kanara...	10 ...	9
Thana	176 ...	127
Khandesh	49 ...	44
Nasik	73 ...	57
Poona	17 ...	9
Satara	180 ...	158
Sholapur	10 ...	7
Ahmednagar ...	8 ...	7

Districts (cont.)	Cases.	Deaths
Kolaba	81 ...	57
Ratnagiri	8 ...	4
Belgaum	227 ...	180
Dharwar	301 ...	244
Bijapur	84 ...	62
Political Agencies.		
Baroda...	153 ...	118
Kathiawar	3 ...	1
Kolhapur	269 ...	199
Cutch	13 ...	6
Mahi Kantha ...	1 ...	0
Rewa Kantha ...	2 ...	8
Palanpur	2 ...	5
Savanur	1 ...	1
Aundh	2 ...	2
Bhor	5 ...	3

* Much false registration occurs and the plague mortality (judging from the excess of deaths over the average) is more probably 1500. The whole of the list is probably very much underestimated both in the number of cases and of deaths.

The number of cases and deaths for the week ending Feb. 17th were 2857 and 2258 respectively, making the totals of cases and deaths up to date 230,175 and 182,156 respectively. Karachi, Hyderabad, Shikarpur, Upper Sind Frontier, Thar and Parkar districts and Dharampur, Sachin, Janjira and Akalkot States were free. There have been no deaths from plague among Europeans for several weeks. In addition there has been a marked increase in the Kolar Goldfields and a recrudescence in Calcutta. There have been 24 cases and 17 deaths in Calcutta and there has been a disturbance almost amounting to a riot over the question of disinfecting some dangerous and suspected premises. In Bombay city the total mortality has risen from 1907 to 2249 for the past week—a rate of 139·97 per 1000 per annum. As the average weekly mortality is considerably under 600 this indicates a probable mortality from plague of over 1500, and yet the plague returns only show 945 deaths as reported from this disease. Only 313 of the cases of plague discovered went to hospital. As the plague returns are so faulty I give the general death-rate in Bombay amongst the various races and castes calculated on the number of deaths for the past week :—

Low caste Hindus	at the rate of	225	per	1000	per annum.
Caste Hindus	,, ,,	150	,,	,,	
Mohamedans	,, ,,	138	,,	,,	
Native Christians	,, ,,	112	,,	,,	
Bhattias	,, ,,	106	,,	,,	
Brahmins	,, ,,	97	,,	,,	
Eurasians	,, ,,	96	,,	,,	
Parsees	,, ,,	53	,,	,,	
Europeans	,, ,,	5	,,	,,	

The recrudescence is developing in Poona and there is a further increase recorded at Karachi. Here the town is being rapidly evacuated—the residents camping out in the adjacent country. Plague is increasing in Broach city but it is important to note that while only part of the city has been evacuated hardly a case occurs in the segregation camps. This is very strong evidence for clearing all the people out of the houses of an infected town.

The plague rules have been applied to Jeddah (the port for Mecca) and there is reason to believe that more cases are occurring in East Africa than become publicly known.

A considerable number of cases of plague have been treated with the steam bath at one of the hospitals in Bombay and a report upon the results has been issued by Dr. Twigg. The method has been adopted on the theory of eliminating the poison of plague from the system, but while certain symptoms seem to have been relieved by it and it seems popular amongst some of the natives, the figures published endeavouring to show its power to lower the mortality and to prolong the average duration of life are vitiated by the selection of cases. The same error was made with regard to the cases treated with Lustig's and Roux's sera and the statistics are absolutely valueless. There does not appear to be any satisfactory ground for supposing that this method of treatment is of any material value.

To show the extraordinary change of opinion which has taken place in plague administration amongst responsible authorities I refer to the concessions which have just been made in the new regulations for Calcutta. Of course all outgoing vessels must have clean bills of health, but for the city itself the failure to discover cases has so impressed the authorities that anything like forcible measures either to detect cases or to insist on their removal to hospital have been abandoned. Patients will be permitted to resort to ward, caste, or family hospitals if they like and persons will be permitted to set apart portions of their dwellings or gardens for use as private hospitals. In future no person will be removed to a public hospital without his consent provided that suitable arrangements are made for the treatment of the case at home. The other inmates are *to be induced* to remove elsewhere. Medical attendance and medicines are to be provided free of cost. These changes mean that nearly all cases will be treated in their own homes and that very few will go to the hospitals. There is no prospect, however, that by these means a larger number of the cases will be reported. On the contrary there is every reason to believe that more cases will occur and that the authorities will hear nothing about them. This is the experience of Bombay. It amounts to letting the plague pursue its course without let or hindrance, but it is true that no measures except wholesale evacuation have any effect on the course of an outbreak of plague. The value of disinfectants appears to be more than doubtful. The new policy is either a concession to native opinion or an admission of impotence to check the course of the disease. A rumour is current that the Government have stopped Professor Wright's inoculation against typhoid fever. Considering how common typhoid fever is in India and the severer type (mortality 25 per cent.) that it assumes compared with the disease at home and the large number of soldiers (over 1800) annually on the sick list from it, this prohibition seems an example of official and meddlesome interference. Inoculation has been of course purely voluntary but many soldiers at Bangalore and Rawalpindi have availed themselves of its protection. It was purely an experiment among Europeans so that the feelings of the natives on the matter had not to be considered. It is difficult to see what reason can be shown by the Government against the use of this prophylactic in the face of the annual loss of life (about 500) amongst so large a proportion of the youngest troops, and typhoid fever seems especially fatal amongst the young officers newly arrived in India. If the rumour be correct this is not the first time that scientific work has been officially prohibited.

The Plague Commission have taken measures to test for themselves the efficacy of Lustig's curative serum. The figures hitherto published are unreliable in consequence of the cases not having been taken in regular order on admission to the hospital. A certain number of cases will be put under special observation, and one half of them will be treated with Lustig's serum and the other half without it. In consequence of the serum obtained from different horses varying in its apparent curative powers it is proposed to mix and average the serum obtained from the different horses at the Parel Laboratory. It is impossible to use the curative serum with the same extravagance as has accompanied the use of the preventive preparations for the simple reason that it cannot be made in sufficient quantity, but I think that at this stage of the epidemic when abundant time has been given for its preparation a much larger quantity should be obtainable for public use.

The Plague Commission have been sitting at Satara and

Belgaum, but the greater part of the evidence is merely an account of the measures taken to limit the progress of the plague or consists of descriptions of its course. No evidence of any scientific value has been published during the week. The *Times of India* remarks that "the reputation of the Plague Commission is still to be made, for the mere collection of such evidence as the Commission have so far got together can scarcely justify their travelling expenses."

March 1st.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Liverpool Chamber of Commerce and Tropical Diseases.

IN view of the prominence now given to the subject of the study of tropical diseases it will be interesting to recall the efforts made by the Liverpool Chamber of Commerce in June, 1896, to obtain information as to the means of combating with blackwater fever. The African Trade Section of the Chamber, of which Mr. Alfred L. Jones was the chairman, invited Dr. Edward Adam (whose appointment by the Liverpool Chamber of Commerce as the delegate of the Chamber on the Liverpool School of Tropical Diseases was recorded in THE LANCET on March 18th) to address the section on the subject of the means for combating with blackwater fever. Dr. E. Adam, in reply, said that with regard to the curative treatment of the disease he had no specific remedy to suggest, but in his opinion every case was best treated on its own merits. He thought that more attention should be directed to preventive measures, and in this connexion suggested the possibility of the application of a method of inoculation as was done in vaccination and as was then being done for the prevention of cholera in India. He called attention to the large outlay which would be involved in experiments which could only be carried on by means of Government aid. Dr. Adam also stated that blackwater fever was comparatively unknown on the West Coast of Africa until the last 15 or 20 years. During a residence of six years in Old Calabar he had never seen a case and had never heard of it until recently. No reference was made to it by Sir Ranald Martin in his book on tropical diseases, and it was difficult to account for the introduction and serious development of this malady on the West Coast of Africa. Other interesting suggestions were made by Dr. Adam in regard to preventive measures, such as the purification of the local water-supply and due regard to the physical condition of those leaving Europe for service on the West Coast of Africa. Bad teeth giving rise to indigestion, also to neuralgia, causing loss of rest and lowering of the resistive vigour of the body against disease, were a frequent source of trouble. The address was favourably commented upon by the *Lagos Echo* of Sept. 19th, 1896, which remarked that if "some parts of the Coast have not without reason earned the gruesome appellation of the 'white man's grave,' it is no less true that many Europeans in the forcible language of the doctor 'dig their own graves' as much while they are in Africa as when on furlough in England." Another donation to the School of Tropical Diseases is announced. Messrs. Swan and Hunter, the well-known shipbuilders of Wallsend-on-Tyne, have intimated to Mr. Alfred L. Jones, the chairman, their willingness to subscribe £100 a year towards the funds of the institution. The income of the school, I believe, now amounts to close on £1200 a year. The chairman and the committee of the School of Tropical Diseases have issued invitations for the inaugural dinner which will be held at the Adelphi Hotel on Saturday, April 22nd.

Liverpool Ladies' Charity.

The annual meeting of the Liverpool Ladies' Charity and Lying-in Hospital was held in the town-hall on March 27th, under the presidency of the Lord Mayor. The report expressed congratulation that, owing to the favourable condition of the working classes, the number of women who applied for the benefits of the Charity showed a further reduction. 1633 poor women were attended by the midwives in their own homes. In 336 cases the patients were so poor as to make it necessary for the Charity to assist them in lending the needful bedding and clothing. The mortality in the hospital had been unusually large during the year 1898, the deaths numbering nine. The expenditure for the year had amounted to £2455 8*s.* 8*d.*, whilst the income from all sources had been only £2146 7*s.* The committee were therefore compelled to realise investment stock to provide the deficiency. The honorary secretary expressed regret that no medical student had availed himself of the midwifery work of the institution. The committee are making arrangements for receiving into the hospital carefully selected cases of unmarried girls who are about to be confined and who have previously borne a good character.

Liverpool Infirmary for Children.

Dr. Robert Craig Dun, the senior demonstrator and assistant lecturer on anatomy in University College, Liverpool, has been appointed honorary surgeon to the Infirmary for Children in the room of Mr. R. W. Murray, who has been elected to a similar post at the Northern Hospital.

March 28th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The New Commissioner in Lunacy.

ON the recommendation of the Secretary for Scotland the Queen has been pleased to appoint Dr. John Macpherson, medical superintendent of the Stirling District Asylum, Larbert, to be a Medical Commissioner in Lunacy for Scotland in place of Dr. John Sibbald, retired.

Edinburgh Royal Infirmary.

At the meeting of the managers of the Edinburgh Royal Infirmary held on Monday, March 27th, intimation was given of a donation of £50 from the Earl of Stair, K.T., towards the expenses of the "Nurses' Home of Rest." In connexion with this the Rev. Dr. Scott referred to this home as a new departure on the part of the managers and expressed the opinion that in it they would have the sympathy and attention of the public. He hoped that his lordship's example would be largely followed.

Mr. J. C. Wordie, Oriental Club, London, has, through Dr. Hunter Mackenzie, given a third donation of £100 to the Eye, Ear, and Throat Infirmary, Edinburgh.

March 28th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Roman Catholic University Medical School, Dublin.

THE governing body of the Roman Catholic University Medical School have recently received a letter from the Secretary of State for War authorising them to nominate a student of that school for a commission in the Royal Army Medical Corps. The nomination must be made at an early date, as the candidate who is selected will be obliged to report himself at Netley on April 4th.

Sir William Stokes.

The honorary membership of the Imperial Academy of Medicine at St. Petersburg has recently been conferred on Sir William Stokes of Dublin, Surgeon-in-Ordinary to the Queen in Ireland. This is the first occasion on which this honour has been confered on a member of the surgical profession in this country.

The Training of Nurses in County Infirmaries.

The new rule made by the Local Government Board in reference to the training of nurses, the effect of which would be to exclude the training of all those residing in infirmaries or hospitals in Ireland outside Dublin, Belfast, and Cork, is causing a great deal of discussion. At the monthly meeting of the Londonderry Infirmary Board on March 21st, the matter was under consideration, when Sir W. Miller, the well-known surgeon of that institution, claimed that in such a place a nurse gets a far better training than in a clinical hospital where there are students, as the probationers were taught everything—how to bandage and how to give assistance in surgical matters, such as setting fractures and dislocations. It was decided to ask the Local Government Board to inspect the Londonderry Infirmary so as to satisfy themselves of the modern lines on which it was conducted, as well as the advantages it offered in the training of

nurses. Surely the training which a nurse received in a large county infirmary like that at Londonderry was quite ample to qualify her for nursing in a workhouse. At the weekly meeting of the Limavady Board of Guardians held on March 27th a strong protest was made against the action of the Local Government Board in reference to the nursing question on the grounds that (1) there would be an inadequate supply of the class of nurses which it had been made imperative to appoint, and (2) because the decision would practically exclude Northern probationers from obtaining the necessary qualifications, owing to the expense and inconvenience which would be entailed in their having to be trained in hospitals so far from their homes instead of institutions such as the county infirmaries. Evidently there is a strong opposition to the recent action of the Local Government Board.

Ulster Eye, Ear, and Throat Hospital.

The annual meeting of this hospital was held on March 27th, when it was reported that during the year 1898 1565 patients had been treated at the hospital, of whom 201 were admitted as interns. The total receipts of the hospital from all sources had been £607 5*s.* 4*d.* and the expenditure had been £706 18*s.* 8*d.*, leaving the debt of the hospital £100 more than in the last financial year. The total debt of the hospital is £570 5*s.* 5*d.* The committee make special reference to the difficulty of securing funds for hospital purposes and as they have patients from several counties in Ulster they propose to endeavour to secure aid from the country. Electric light had been introduced into the hospital. It had been decided to change the name of the hospital to that of the "Benn Ulster Eye, Ear, and Throat Hospital," so as to perpetuate the name of the Benn family who have done so much for Ulster by the establishment and endowment of this and other hospitals in Belfast.

The Belfast Ophthalmic Institution.

The report presented at the annual meeting of the supporters of this hospital which was held on March 27th showed that during the year 1898 1889 cases were treated, of which 1149 were eye cases, 370 ear cases, 270 throat cases, and 100 intern cases. The importance of a re-arrangement and enlargement of the extern department and the absolute necessity for a new operating room more in keeping with the advance of modern surgery were dwelt on, and it was said that these changes could be accomplished for £300. A large number of students were receiving clinical instruction. Financially the hospital was in a very sound condition, there being a balance of over £103. The report submitted was in all respects very satisfactory.

March 28th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Diagnosis of Tubercle Bacilli in Pleuritic Fluid.

M. Besançon and M. Griffon have just made known a discovery which promises to be of the greatest use in the diagnosis of the tubercle bacillus in cases where direct microscopical examination is of no avail, as for instance in the effusions of pleurisy. Until now the accepted method has been to inject some of the suspected fluids into the peritoneal cavity of a guinea-pig, but this procedure often failed to give any definite result even when the fluid came from a patient undoubtedly the subject of tubercle. Possibly the serum itself possessed immunising qualities, or else the microbes were in so very dilute a solution that there were too few in the small quantity of fluid injected to affect the animal. The cultivation method would have given good results if the operator could have been certain of always using a cultivation medium of a constant nature. Such a medium, however, was not known until M. Besançon and M. Griffon took to using agar-agar (*gélose*) mixed with blood. Pus from a chronic abscess connected with the ribs cultivated after this method gave at the end of 10 days bacilli visible under the microscope. Pleuritic fluid from two patients, cultivated in the same way gave colonies visible to the naked eye at the end of 28 days. Bacilli from these under the microscope are absolutely characteristic. As a control experiment two guinea-pigs were inoculated at the same time with the same fluid, and one of these animals which was killed at the end of 28 days showed no visible lesion due to experimental tuberculosis. In this case, then, the presence of the tubercle bacilli could not have been demonstrated without the culture method, and it is evident that this mode of research will be very useful. By it observers will be able to diagnose the presence or absence of the tubercle bacilli in various effusions, such as those into the joints, the tunica vaginalis, the peritoneum, or the meninges.

Army Medical Statistics for 1896.

The seventh statistical report on this subject has just been published by direction of the Minister of War. It is evident from the figures brought together therein by military surgeons that the sanitary condition of the army was much better in 1896 than it was in the two preceding years. The efficients who served as a basis for the calculations in this report numbered 508,825 of all ranks, of which 17,961 were officers, 35,022 non-commissioned officers, 259,272 privates with more than one year of service, and 197,570 privates of less than one year of service. The general sickness rate was only 573 per 1000. In 1895 it was 631, and in 1894 it was 592. The total number of deaths was 2959, being a death-rate of 5·24 per 1000—by far the lowest yet observed in the army. The chief diseases showing a diminution were influenza, typhoid fever, and acute pulmonary complaints. 12,339 soldiers had resigned or had been invalided out for sickness, wounds, or other forms of weakness. This is a reversion to normal conditions following the doing away with the recruiting of young soldiers classified as "bons avec infirmités." Out of 22,680 reserved men called up during 1896 for periods of training 25 died with the colours, and 2048 were invalided. There is no return from the militia (*l'armée territoriale*).

The Lowering of Temperature in Weakly Children.

At the meeting of the Academy of Medicine held on March 14th M. Budin spoke upon the Lowering of Temperature in Weakly Children. From certain observations which he had made he considered himself authorised in stating that a child begins to lose heat from the moment of birth. This loss of heat may be very considerable in the case of a weakly child unless the greatest precautions are taken to avoid it. M. Budin had noticed that children brought to the Maternity Hospital for admission into the wards set apart for weakly children were often in a most deplorable condition. In many of them the temperature was very low and they died in from 24 to 48 hours after admission. Of 142 newly-born children admitted to the hospital in the years 1895, 1896, and 1897 whose rectal temperature was but 33° C. or even below it 139 died—a mortality of 98 per cent. Of course this loss of heat is not the only cause of death in such cases for other factors have to be considered, such as syphilis, digestive disorders, and the like. Loss of heat, however, is a most important factor for, according to M. Budin, if precautions are taken to obviate this the mortality even in very weakly children falls from 98 per cent. to 26·5 per cent. In bringing this class of children from their homes to the hospital the greatest care must be taken, and for many years past the Assistance Publique has charged the nurses who fetch the children to travel by express trains and in well-warmed second-class carriages. The same precautions should be taken by other than the official nurses. Children placed in the revolving boxes (*tours*) of foundling hospitals or who are taken into cold churches or to the Mairie run great risks, and it is of the greatest possible importance for the well-being of newly-born or weakly children that all causes of chill should be avoided.

March 27th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Reform of the Italian Universities.

ALL the professions, not least that of medicine, are profoundly interested in the great University Reform Bill which was carried through its second reading last week by its author, Baccelli, and which is about to undergo the inevitable modifications in "Committee of the whole House." During the debates which preceded its advance to that stage it was a significant fact that a large proportion of the 20 "seats of learning" open to Italy's 31,000,000 inhabitants (half of whom are "analfabeti" or

the next thing to it) were either wholly or partially closed by order of Baccelli himself owing to insubordination on the part of the students. Nothing, indeed, can be more radically unsound than the Italian university system, and it is to the honour of our profession that from its ranks have mainly come the men who have most effectively diagnosed the evil and most convincingly formulated the treatment. Weed out the "groves" of the Italian "Academe"; let their really vigorous developments have more breathing space and room to expand by extirpating the stunted "academic undergrowth" (as the minor universities may be called); and let the young brains of Italy have the chance of moulding and forming themselves for professional work under the protecting, fostering shade of the true "forest-giants" of literature, science and philosophy—"hic labor, hoc opus est." The Bill by which Baccelli undertakes to rehabilitate his country's languishing university life may be broadly described as an application to academic institutions of the law of "natural selection" with its consequent "survival of the fittest." He grants to all universities the completest autonomy in teaching, in administration, and in discipline; he leaves them the freest possible hand in adapting themselves to professional interests, scientific and practical; and he subjects them only to such outside pressure as may keep them useful purveyors for the wants of the State. For this purpose he institutes a "State examination" through the portals of which alone the aspiring advocate, medical man, or engineer can become eligible for the official posts the name of which in Italy is Legion, so that according to the success with which they turn out men capable of passing this examination will the university or universities prosper or decay. The examiners appointed by the State may or may not be drawn from the "seats of learning," but there will be no room for "favour" or what may be called "academic nepotism." Another provision which will practically extinguish the smaller universities or reduce them to the rank of preparatory schools will be the raising of the fees which are still absurdly low, remaining fixed at the mediæval standard of money values, and which have thus made professional qualifications too easily accessible to classes more properly claimed by commerce, industry, or the useful arts. Still, the poor man's son will have his chance should superior gifts indicate him for one or other of the liberal callings; he will have the "borsa di studi" (bursary), the scholarship, the "exhibition" not unknown in Italian academic life, reinforced, as Baccelli anticipates, by other bounties of the kind. Reduced in numbers by such restrictive ordinances, the students in each university will be more manageable by the authorities whose hands will be strengthened by a "curator studiorum," a functionary appointed by the State to keep a benevolent eye on academic life and to form the medium through which the State can be appealed to in cases of "excess of jurisdiction" on the part of the profession or of turbulence or contumacy on the part of the students. The Bill when it becomes law (whatever may be its modifications in minor clauses) will, in Baccelli's forecast, guarantee to the students a more thorough and decorous curriculum of study under teachers stimulated to a more honourable rivalry than that of merely underselling each other; the "rector magnificus" of each university will be appointed without intervention of those undergraduate elements which have hitherto bred nothing but tumult and disorder; and the State examination will keep the field open to the most proficient out of all the universities, respecting only the principle of "detur digniori." The free hand vouchsafed to each university will encourage that "flexibility of adaptation" by which courses of study or times and seasons may be modified so as to meet requirements special or general, local or national, all under the pressure, however, of that "State examination," superiority at which will constitute the university's claim to attract the student or future professional man to its halls. Relieved of its plethora of idle undergraduates who simply covet a "diploma" for the social distinction which it may give or the public "career" which it may conduce to, the university will no longer deplete the industries, the trades, and the handicrafts of the country by withdrawing from them their proper *personnel* and inducing the anæmia under which they have long laboured. Every Italian interest, it is hardly too much to say, will profit by the academic revolution to be wrought by Baccelli's Bill, the minor provisions of which cannot fail to emerge from committee more effective and salutary after the thorough sifting which they will have received. Among its critics the best have been Baccelli's own professional colleagues, one of whom, Dr. Tommaso Senise, *privat-docent* in Medical Pathology in the Neapolitan School and Member for the modest constituency of Militello, made quite a parliamentary "hit" by the able speech in which he pointed out defects in the measure which would have to be removed before its really beneficent provisions could attain their end.

March 25th.

CONSTANTINOPLE.

(FROM OUR OWN CORRESPONDENT.)

The New Hospital for Children.

THE inauguration of the Hamidieh Hospital for Children took place a fortnight ago. The need of a special hospital for children has long been felt, as lack of proper care has often proved to be the main cause of the spread of infectious diseases amongst the children of this metropolis. The hospital has grounds covering an area of about 40,000 square feet, on which are erected nine separate blocks. All the different parts of the building are constructed according to modern requirements and are surrounded by beautiful gardens for recreation. The blocks are a good distance apart from each other, so that children with infectious diseases can be isolated in separate wards. One of the blocks is to be used for cases of diphtheria, another for small-pox, a third for scarlet fever, and a fourth for measles. A fifth block is fitted up for cases about the nature of which there is some uncertainty. Three blocks are to be used by the members of the staff. There is, moreover, a nice little laboratory.

The Russian Hospital.

The Russian Embassy has just been authorised by the Imperial Government to have a convalescent home on the beautiful island of Prinkipo where convalescent patients from the Russian Hospital will be sent. This is quite a novelty here, as none of the other large hospitals have such homes. The Russian Hospital enjoys little popularity, but there is no doubt that a good many well-to-do convalescents will take advantage of this new health resort. It may not be out of place to remark that the British Hospital here is practically a seamen's hospital and is almost unknown to the general public, whereas the German Hospital enjoys a first-class reputation, particularly for its surgical department under Dr. Kambouroglou. The French Hospital comes next. A properly equipped British hospital could do good work for the British colony and for numerous patients of different nationalities.

Dr. Delacour.

Dr. Delacour, physician to the French Embassy and delegate of France to the Superior Council of Health, is to return to Constantinople towards the middle of April. Dr. Delacour is widely known here and he will be welcomed back by his old friends, especially by the members of the French colony. He had gone to Nice to recover his health.

March 22nd.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Sydney Hospital.

THE annual report of the Sydney Hospital showed that 3904 patients had been admitted during the year, of whom 390 died. The total number of attendances were: in the casualty department, 26,192; medical, 25,775; surgical, 13,335; eye, 7471; ear, nose, and throat, 6060; diseases of women, 6119; skin diseases, 3456; and dental department, 3893; being a total of 92,301, as against 83,396 for 1897. Reference was made to the honorary medical and surgical staffs, the resident medical staff, the compilation of a new hospital pharmacopœia, the opening of the new buildings for the pathological department, the appointment of Mr. C. H. Helsham, B.A., as secretary, vice Mr. H. D. Russell, the resignation of the matron, Miss Gould, and other matters of management. The cost per bed for the year was £61 9*s.* 11*d.* The income for the year was £17,920 9*s.* 4*d.*, towards which the Government contributed £2370 12*s.* 5*d.* subsidy on the £ for £ principle, £8056 12*s.* for maintenance of patients

admitted on Government orders, £700 towards the Regent-street Dispensary, and £350 for rent of Moorcliff and Victoria Lodge. Towards the maintenance of the hospital the public contributed £2484 17*s.* 9*d.* The expenditure exceeded the income by £3309 9*s.* The directors added: "In spite of the earnest efforts made to keep the amount of subscriptions equal to that collected in former years it has not been found possible to do so owing to the continued succession of bad seasons and the general scarcity of money. A considerable falling-off in revenue has to be announced for the past year, while the expenses do not show a corresponding reduction. This is to be sincerely regretted, but an analysis of the balance-sheet will show that the expenses have been kept within the most reasonable limits consistent with a satisfactory discharge of the calls made upon the hospital."

The Alfred Hospital, Melbourne.

It is proposed to establish a children's department in connexion with the Alfred Hospital, Melbourne. The Children's Hospital is greatly overcrowded. The matter was left to a sub-committee to consider in conjunction with the medical staff.

Launceston Hospital.

A dispute has been waging for some time between the members of the branch of the British Medical Association in Launceston, Tasmania, and the hospital board as to the medical control of the hospital. At present the patients are in charge of a resident staff, the honorary staff being merely consultants. The members of the branch desire that the patients should be under the care of an honorary staff and they complain further that the board has treated the branch and the profession in a "most unsatisfactory and cavalier manner." The board, however, has relaxed so far as to permit a member of the honorary staff to take charge of any special case or perform an operation at the hospital so long as the resident surgeon-superintendent approves. Dr. Pike, Dr. Pardey, Dr. Holmes, and Dr. Parker have been elected as the honorary consulting staff for the ensuing year.

Colour-blindness in Railway Employés.

3201 employés on the Victorian railways have now been examined by the medical officers and it has been found that defects of sight and especially colour-blindness are not so prevalent as was supposed when the sight-testing investigation was instituted, as 91·3 per cent. passed the examination. For the 278 who failed a practical examination was given and 115 passed.

Diet of Australians.

In various publications and lectures Mr. Muskett of Sydney has called attention to the fact that Australians eat too much meat and not enough vegetables. Mr. Hodgson, of the same city, in a recent lecture maintained the opposite contention and asserted further that owing to the excess of starch and sugar in the ordinary Australian diet diabetes was becoming alarmingly prevalent. He believed that eight out of 10 people suffered from this disease. If this is true—and Mr. Hodgson advanced no statistics in support of his belief—it is remarkable that the death-rate from diabetes is not greater and has not increased, the figures being: 1892, 25 deaths; 1893, 22; 1894, 14; 1895, 26; 1896, 20; 1897, 20. Mulhall's Dictionary of Statistics shows, moreover, that Australia is highest in the list as a meat-eating nation, the consumption being 276 lb. of meat per inhabitant per year, as against 118 lb. in Great Britain.

Feb. 8th.

Obituary.

AMBROSE BLITHE VISE, M.R.C.S. ENG., L.S.A.

As already announced in our columns, Mr. Ambrose Vise, of Abbott's Manor House, Holbeach, passed away on March 4th at the age of 68 years. He entered as a student at St. Bartholomew's Hospital in 1851, and became qualified as M.R.C.S. Eng., L.M., and L.S.A. in 1854. For a year he was clinical assistant at the Brompton Consumption Hospital and on the termination of this appointment he removed to Holbeach where he continued to practise for upwards of 44 years, until in July last he was compelled to retire from active work owing to failing health. He held the post of medical officer to the South District of the Holbeach Union for a period of over 42 years and was also public vaccinator for the same district. He was likewise Admiralty surgeon to Holbeach, Fosdyke, and Fleethaven for about 30 years. Mr. Vise was the son of a medical man (Edward Blithe Vise), who was the son of a medical man (William Vise), who was the son of a medical man (Francis Vise). Mr. Ambrose Vise's son, Mr. Arthur Blithe Vise, is also a medical man so that in this family there have been medical men for five successive generations, an encouraging tribute to the vitality of our profession and a history which deserves to be recorded.

Medical News.

VICTORIA UNIVERSITY.—At the examinations held in March in the Faculty of Medicine the following candidates were successful:—

FINAL EXAMINATION.

Part I.—A. G. S. Broughton, Yorkshire College; T. L. Fennell, R. F. Ferris, A. E. Finney, and E. F. Hill, Owens College; A. E. Horsfall, and C. E. Horsfall, Yorkshire College; P. H. Hutton, Owens College; F. W. Johnson, Yorkshire College; L. R. Lempriere, and B. C. Middleton, Owens College; W. H. Morrison and R. V. A. Mosley, Yorkshire College; R. S. Nichol, W. P. Noall, and H. W. Russell, Owens College; and G. M. Sharpe, Yorkshire College.

Part II.—J. W. Aldred, Owens College; T. T. Bark, University College; *John Craig, Owens College; J. T. Grierson, University College; T. W. Hart and J. E. Healey, Owens College; W. S. Henderson and J. E. W. McFall, University College; Thomas O'Neill, Owens College; J. A. Reed, Yorkshire College, and Graham Renshaw, *W. H. Richardson, and *O. H. Woodcock, Owens College.

* Awarded second-class honours.

UNIVERSITY OF CAMBRIDGE.—On March 16th the following degrees were conferred:—

M.B. only.—F. P. Cayley, B.A., Trinity.
M.B. and B.C.—W. Eardley, M.A., and W. K. Wills, M.A., St. John's.
M.A. (honoris causâ).—G. Sims Woodhead, Professor of Pathology.

The examination in Sanitary Science for the diploma in Public Health will take place as follows:—Part I., April 4th to 6th; Part II., April 11th to 13th.

DEATH OF A CENTENARIAN.—Miss Dinah Young of Bellevue-crescent, Clifton, who completed her 101st year in September last, died on March 18th.

SUPERANNUATION GRANT.—Mr. Thomas Cotton, M.D. St. And., L.R.C.P. Lond., M.R.C.S. Eng., has been awarded a superannuation allowance of £120 after 34 years' service as medical officer of the Upper Holloway district.

ACTION FOR LIBEL.—At the Glamorganshire Assizes held on March 21st before Mr. Justice Darling a libel action was brought against Dr. John Davies of Maesteg by Dr. W. H. Thomas, J.P., of the same place. The cause of the action was the publication of a letter to the Bridgend Board of Guardians and also to a local newspaper in which defendant complained of the absence of professional etiquette on the part of the plaintiff. The plaintiff claimed £1000 damages. Eventually the defendant withdrew absolutely the statement which he had made about Dr. Thomas. In the result a juror was withdrawn.

PRESENTATIONS TO MEDICAL MEN.—The Mayor of South Molton, Devon, recently presented the medallions and certificates to the successful members of the South Molton branch of the St. John Ambulance Association. Afterwards Alderman Bush, J.P., presented Mr. F. W. Kendle, M.R.C.S. Eng., with a silver-mounted walking stick in appreciation of his services as honorary instructor of the class.—The members of the Young Men's Christian Association at Dartmouth, who had formed a class in connexion with the St. John Ambulance Association, on March 8th presented Mr. Arthur Kyffin Crossfield, L.R.C.P., L.R.C.S. Edin., with a riding whip in appreciation of his services as honorary instructor of the class.—At the conclusion, a few days since, of his lectures on Ambulance First Aid in Morley (Leeds) Mr. W. Gorrie, M.B., Ch.B. Edin., was presented with a leather dressing-case in token of his pupils' esteem.—Mr. Francis C. Bryan, M.D. Durh., M.R.C.S. Eng., upon leaving Littlehampton has been presented by his friends and patients

with a silver bowl and an illuminated address on vellum.—At the Town-hall, Bootle, on March 10th, Mr. John McMurray, M.D. R.U.I., was the recipient of a testimonial. He was elected mayor of the borough in November, 1897, and on the termination of his year of office in November last it was generally felt in the community that the ability and courtesy with which he and Mrs. McMurray had discharged the civic functions of the year merited some public recognition from the residents, and a committee to promote this object was accordingly appointed. Subscriptions were freely given, the result being the presentation of a horse and a brougham, with an address, handsomely bound, in which is inserted a photograph of the horse and the carriage, and the outside of the case is embellished with the arms of the borough. The occasion was celebrated by an "At home" given by the present mayor and mayoress which was numerously attended.—Mr. H. P. Olivey, M.R.C.S. Eng., who has been a resident of North Curry for 40 years, was on March 17th, on the occasion of his leaving the district, presented with several gifts from the inhabitants—namely, an illuminated address signed by 160 subscribers, a silver inkstand, a pair of candlesticks, and a writing case, and from the North Curry Cricket Club a case of pipes.—At a well-attended public meeting held on March 21st at Dalkeith, to celebrate the semi-jubilee of Mr. Robert Lucas, M.D., F.R.C.P. Edin., medical officer of the burgh and Surgeon-Lieutenant-Colonel of the 3rd Battalion Royal Scots, Provost Liddell, who presided, presented Dr. Lucas, on behalf of the subscribers, with a testimonial, consisting of a marble timepiece and ornaments, together with a bank draft for about £350.—On the same day Mr. John Settle, L.R.C.P., L.R.C.S. Edin., medical officer of the County Borough of Barrow-in-Furness, was the recipient of a half-size portrait of himself in oils from the members of the Hindpool Lodge of Freemasons, Barrow.—On March 24th Mr. George Barker, the retiring chairman of the Consumption Hospital, Liverpool, testified his appreciation of the services of the staff and as a memento of his long association with the institution presented gifts to each member of it, including the matron, nurses, servant, and porter.—Mr. Ernest George Symes Saunders, M.D., C.M. Aberd., was presented on March 23rd with a silver-mounted malacca cane by the Calstock (Cornwall) branch of the St. John Ambulance Association in appreciation of his services as honorary instructor of the class.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Companies (Medical Profession) Bill.

THE Lord Chancellor has introduced into the House of Lords a Bill with this title, the object of which is to prohibit the profession or business of physician, surgeon, dentist, or midwife being carried on by a company.

The Vaccination Question.

When the motion is made, probably on the Monday after Easter week, in the House of Commons for going into Committee of Supply on the Civil Service Estimates Mr. Pickersgill will call attention to the Vaccination Order of Oct. 18th and the covering letter of the President of the Local Government Board to the boards of guardians, and if the rules of the House permit he will move a resolution on the subject.

Pharmacy Bill.

A Bill has been introduced into the House of Lords by the Government to amend the Pharmacy Act of 1868.

Isolation Hospitals.

THE Earl of LICHFIELD has introduced in the House of Lords a Bill to amend the Isolation Hospitals Act of 1893.

HOUSE OF COMMONS.

THURSDAY, MARCH 23RD.

The Peculiar People.

Major RASCH asked the Home Secretary whether his attention had been called to the case of Senior, a member of the Peculiar People, who received a sentence of four months' imprisonment for neglecting to provide medical treatment for his child; and whether he would consider the advisability of remitting the remaining portion of Senior's sentence.—Mr. JESSE COLLINGS, who replied to the question, stated that the offence of which Senior was found guilty was manslaughter. The case had received careful attention, but no sufficient ground had been shown for a remission of any part of the sentence.

Sewage Treatment at Epping.

Mr. T. W. RUSSELL, replying to a question on this subject addressed to him by Sir F. DIXON-HARTLAND, said: The Local Government Board have received complaints on the subject of the sewage at Epping. The urban district council applied in November, 1897, for sanction to a loan for works of sewerage and sewage disposal and also for a provisional order for the compulsory purchase of land for the scheme. This order was confirmed last session, but the district council state that they have experienced difficulty in acquiring the land and they are considering a different scheme from that originally contemplated. The Board are communicating with the district council, urging them to proceed at once in the matter.

FRIDAY, MARCH 24TH.

Death of a Recruit on Parade.

General RUSSELL asked the Under Secretary of State for War whether his attention had been called to the sudden death of a specially enlisted recruit on Friday last on parade at Windsor; whether this recruit was passed by a civilian doctor or a duly qualified member of the Army Medical Staff; and whether he would cause a special inquiry to be made into this case so as to avoid if possible such weak and diseased men being again admitted into Her Majesty's service.—Mr. WYNDHAM: Yes, sir, my attention has been called to the death of Private Higson of the Scots Guards. He was passed by a duly qualified officer of the Royal Army Medical Corps. A full inquiry into his case is now in progress.

MONDAY, MARCH 27TH.

Court Fees of Medical Witnesses.

Dr. FARQUHARSON asked the Home Secretary whether his attention had been directed to the inadequate scale of fees for medical witnesses in courts of law and whether he would consider its revision with the view of more adequately remunerating medical men who were compelled to give evidence for their loss of time and expense incurred.—Mr. JESSE COLLINGS, replying on behalf of the Secretary of State, said: This matter has received most careful consideration, but the Secretary of State does not see his way to take any steps in the direction suggested.

The Case of Mr. Lamont.

Sir CHARLES CAMERON asked the Lord Advocate (1) whether his attention had been called to the unanimous acquittal by a jury of Mr. Lamont, formerly public vaccinator in the Island of Uist, tried at Inverness on March 15th for issuing false certificates of vaccination, when it was proved that his district was over 35 miles long and from five to 10 miles broad and intersected by numerous branches of the sea, and that many of the houses were five miles off any public road and could only be reached by fording; (2) whether he was aware that Mr. Lamont's alleged crime consisted in not having returned to inspect at the end of the week the infants vaccinated before issuing a certificate of successful vaccination, and that the fee for the double journey and operation was 2s. 6d.; (3) was he aware that this charge was kept hanging over Mr. Lamont's head for six months, thereby preventing him from accepting a Government appointment in India; and that he was finally arrested on a warrant issued by Dr. Mackenzie, an honorary sheriff, who was one of the witnesses against him in the case, kept in a police cell in Glasgow from Saturday till Monday, conveyed to Uist in charge of a policeman, and obliged to find bail for £100 before being liberated; and (4) if he would state at whose instance these proceedings were taken and whether they were taken under the provisions of a statute or of rules issued by the Local Government Board, and if under the latter whether until within the last few days no means had been taken either by the local authorities or the Local Government Board to acquaint them with the existence of such rules.—The Lord Advocate replied: The answer to the first paragraph of the question is in the affirmative. The answer to the second paragraph is that Mr. Lamont was charged with fabricating and uttering false certificates. In answer to the third paragraph I have no knowledge of a Government appointment having been offered to Mr. Lamont, but that in any case such a circumstance could not have affected the procedure. My information is that Mr. Lamont was warned not to leave the Long Island as proceedings were pending which might necessitate his attendance for declaration and committal. He did leave the Long Island and left no means of acquiring his address, the result being that a warrant of apprehension was applied for by the Procurator-Fiscal and obtained from the resident honorary sheriff substitute in common form. The warrant was put into the hands of the police in Glasgow and was executed by them. I regret that Mr. Lamont should have been subjected to the indignity and inconvenience of an apprehension, but I think the action of the Procurator-Fiscal was justifiable under the circumstances which I have above stated. The answer to the fourth paragraph is that the proceedings were not under any statute or in respect of rules of the Local Government Board but were at common law upon an information laid by the parish council and precognitions taken by the Procurator-Fiscal in ordinary course.

Phosphorus and Lead Poisoning.

Mr. JESSE COLLINGS said in reply to a question that he hoped after the Easter Recess the Home Secretary would be able to make a statement as to the action which the Home Office would take on the reports recently laid before Parliament with regard to phosphorus and lead poisoning. He might refer Members to the memorandum by the Chief Inspector of Factories prefixed to the phosphorus report and the circular on the lead poisoning report issued by the Home Office as indicating the general lines of probable action.

Notification of Infectious Disease.

The Bill introduced by Sir Francis Powell to extend the Infectious Diseases Notification Act, 1889, to districts in which it has not been adopted was read a second time without debate at this sitting of the House.

Sale of Food and Drugs Bill.

On the motion of the Government this measure was referred for consideration to the Standing Committee on Trade. Several Members, including Sir Walter Foster, protested against the reference.

TUESDAY, MARCH 28TH.

Vaccination at St. Pancras Workhouse.

Mr. CHANNING asked the President of the Local Government Board (1) whether he was aware that the entries in the medical officer's book at the St. Pancras Workhouse show that between Jan. 1st and Feb. 22nd, 1899, there were vaccinated in the workhouse three children eight days old, one child 11 days old, one child 12 days old, three children 13 days old, one child

16 days old, one child 18 days old, and one child 23 days old; and (2) whether, considering that this vaccination of infants of from one to three weeks of age was contrary to the intention of the Second Schedule to the Vaccination Order of Oct. 18th, which prescribes that the offer to vaccinate shall be made when the child is two months old, and that the Royal Commission condemned the practice of premature vaccination, he would direct the St. Pancras medical officer to discontinue this practice.—Mr. CHAPLIN replied: I find that the facts are as stated in the first paragraph of the question. The medical officer states, however, that in every case the parent specially requested the vaccination of the child and that no compulsion, persuasion, advice, or offer was resorted to. He adds that all the cases referred to have been satisfactorily protected from small-pox and have suffered no complications whatever. There is nothing inconsistent either with the Vaccination Act, 1898, or the Vaccination Order in a child being vaccinated at an early age if the parent desires it, nor as far as I know is there any power to prevent it.—Mr. CHANNING: Does the medical officer receive fees?—Mr. CHAPLIN: No, not the medical officer; the public vaccinator.

Queen Charlotte's Hospital.

Mr. CHANNING asked the President of the Local Government Board whether his attention had been called to the vaccination in Queen Charlotte's Hospital of the infant child, Humphrey, of Mrs. George Forbigger of 21, Belgrave-road, Cambridge, when only two days old, although the child was suffering from eczema when he and his mother were discharged on Feb. 11th, and to the fact that the disease had since become so serious that the child had been in hospital; whether he was aware that the subscribers' letters securing admission to Queen Charlotte's Hospital still contain a stipulation that the child must be vaccinated before the mother leaves the hospital, that was within 14 days; whether the hospital authorities now hand or show to patients any notice that parents cannot, under the Act passed last year, be compelled to have their children vaccinated under six months. And, whether he would take immediate steps to secure, in Queen Charlotte's Hospital and similar institutions, a strict observance of the provisions of the Act.—Mr. CHAPLIN replied: I have caused inquiry to be made as to this case and find that a child named Humphrey Terheggen was vaccinated at Queen Charlotte's Hospital as stated, the child being in perfect health at the time. On the eighth day after vaccination a single small pustule had appeared on the child's hand and 28 days after vaccination the child was admitted into Addenbrooke's Hospital, Cambridge, suffering from a very common form of infantile eczema from which it has now almost recovered. The course of the vaccination throughout was quite normal, and during the child's stay in Queen Charlotte's Hospital it steadily gained weight. There is no statement on the subscribers' letters as to vaccination, but it is definitely pointed out on the order of admission that vaccination will not be performed if objection is made by the parent. I have no information as to any notices prepared by the hospital authorities as to the terms of the Vaccination Act, 1898, neither is there any obligation on their part to issue any notices as to the Act; but I am in communication with the guardians of the parish of St. Marylebone and with the vaccinator at Queen Charlotte's Hospital, and I am calling their attention to the provisions of the Act in reference to the vaccination of children in that institution and to the age at which vaccination is required by the Act.—Mr. CHANNING: In his representations to the authorities of the hospital will the right honourable gentleman seek to discourage this early vaccination upon which he himself expressed a very strong opinion last session?—Mr. CHAPLIN: That will be distinctly the effect of the communications I make.

Alleged Cases of Lead Poisoning.

Sir CHARLES DILKE asked the Home Secretary: (1) If he was aware that the deaths had occurred in the Potteries on Jan. 19th of Bertha Carter, engaged in ware cleaning and taking ware from the dipper; on March 13th of William Hopkins, a glost-placer; on March 16th of Arthur Rushton, glost-placer; (2) whether, though all these were persons employed in the most dangerous processes, two of whom had previously suffered from lead poisoning, no inquests were held; and (3) whether he would cause inquiry to be made into the more recent case of Henry Drakeford, dipper, who died on March 18th in a workhouse, where he had been for seven weeks, having been a dipper from the age of 14, and who, after 15 years at dipper's work became subject to fits, from which he had suffered for several years and which were alleged to have been caused by lead poisoning.—Mr. JESSE COLLINGS replied to the question saying: There has been much difficulty in tracing the cases mentioned in the first paragraph of the question, but I now find that in all three cases death was certified as due to other causes than lead poisoning, and in each case the medical man in attendance on the deceased is strongly of opinion that death was not in any way caused by lead. In these circumstances the cases did not and could not come to the notice of the coroner as cases where an inquest might be necessary. Inquiry shall be made into the case mentioned in the last paragraph of the question.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

BEALE, PEYTON T. B., F.R.C.S. Eng., has been appointed Surgeon to in-patients of the Great Northern Central Hospital, Holloway-road, London.

BODY, HENRY MARTIN, M.R.C.S., L.S.A., has been appointed Medical Officer for Tedburn St. Mary by the St. Thomas (Exeter) Board of Guardians.

BULLMORE, W. K., M.D. St. And., M.R.C.S., has been re-appointed Medical Officer of Health to the Falmouth and Truro Port Sanitary Authority.

BURGESS, A. H., M.B., Ch.B.Vict., M.Sc., M.R.C.S., has been appointed Senior Assistant Resident Medical Officer to the Crumpsall Workhouse of the Township of Manchester.

CARGILL, L. VERNON, F.R.C.S. Eng., has been appointed Assistant Ophthalmic Surgeon to King's College Hospital, London.

COLLINS, W. J., M.B., M.S. B.S. Lond., F.R.C.S. Eng., has been appointed one of the Honorary Secretaries of the Prince of Wales's League of Mercy.

GOODING, MATHEW RICHARD, L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer to the Barnstaple Port Sanitary Authority.

JEPHCOTT, C., M.A., M.B., B.C. Camb., M.R.C.S., L.R.C.P. Lond., has been appointed a House Physician to Guy's Hospital, London.

KAY, J. G., M.B., C.M. Edin., has been re-appointed Medical Officer to the Trellech Sanitary District of the Monmouth Union.

KELYNACK, T. N., M.D. Vict., M.R.C.P. Lond., has been re-appointed Pathological Registrar to the Manchester Royal Infirmary.

LEWIS, J. KING, M.R.C.S., L.S.A., has been re-appointed Medical Officer for the Rewe District by the St. Thomas (Exeter) Board of Guardians.

MACPHERSON, JOHN, M.D. Edin., F.R.C.P. Edin., has been appointed a Medical Commissioner in Lunacy for Scotland, vice John Sibbald, retired.

MALINS, HERBERT, B.A. Oxon., M.B., C.M. Edin., has been appointed Second Assistant Medical Officer to the St. Marylebone Infirmary, North Kensington.

MATHIAS, R., M.B. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Pentyrch Sanitary District by the Cardiff Board of Guardians.

MOORHEAD, R. L., M.B., C.M. Edin., has been appointed Medical Officer to the First Sanitary Distict and the Workhouse of the Bridge Union.

REYNOLDS, FRANCIS MORTIMER, M.B., C.M. Edin., has been appointed Medical Officer to the Newton Poppleford District by the St. Thomas (Exeter) Board of Guardians.

RIGBY, HUGH MALLINSON, M.B., B.S. Lond., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Surgical Registrar to the London Hospital, Whitechapel-road, E.

ROBINSON, B., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Rocester Sanitary District of the Uttoxeter Union.

SLOGGETT, HARRY PAYNTER, L.R.C.P. Irel., M.R.C.S. has been appointed a Surgeon on the unattached list of the Victorian Naval Brigade Department of Defence, Victorian (Australia) Naval Forces.

SMITH, THOMAS, L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer to the Brampford Speke District by the St. Thomas (Exeter) Board of Guardians.

TOTHILL, F. C., M.B., C.M. Edin., has been appointed Medical Officer of Health to the Staines Urban District, vice A. Curtis, resigned.

UBSDELL, HENRY, M.R.C.S. Eng., L.S.A., has been re-appointed Medical Officer to Buckfastleigh, Devon.

WHICHER, ALEXANDER HASTINGS, M.R.C.S., L.S.A., has been re-appointed Medical Officer of Health to Midsomer Norton, Somerset.

Vacancies.

For further Information regarding each vacancy reference should be made to the advertisement (see Index).

BIRMINGHAM AND MIDLAND EAR AND THROAT HOSPITAL, Edmund-street, Birmingham.—House Surgeon for six months. Salary at the rate of £42 per annum, with board, lodging, and washing.

BOROUGH HOSPITAL, Birkenhead.—Junior House Surgeon. Salary £75 per annum, with board and lodging, but no wine, spirits, or beer.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's-inn-road, W.C.—House Surgeon. Residence, board, &c., in the hospital.

CHARING-CROSS HOSPITAL, London.—Bacteriologist to the Hospital and Lecturer on Bacteriology at the Medical School.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Clinical Assistant.

COUNTY ASYLUM, Chester.—Junior Assistant Medical Officer, unmarried. Salary £120 per annum, rising yearly by £10 to £150, with board (no liquors), lodging, and washing. Also Medical Officer to act principally as Pathologist. Salary £150 per annum, with board (no liquors), lodging, and washing.

COUNTY ASYLUM, Shrewsbury.—Junior Assistant Medical Officer for four years. Salary to commence at £120 per annum, rising £10 a year to £140 (and £8 in lieu of beer, &c.), with board, lodging, and washing. Applications to the Medical Superintendent at the Asylum.

EAST SUFFOLK AND IPSWICH HOSPITAL, Thoro'fare, Ipswich.—Second House Surgeon for one year. Salary £60 per annum, with board, lodging, and washing.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, London.—Assistant Anæsthetist for six months. Salary at the rate of £10 10s. Also Surgeon to the Out-patients.

HARRIS PARISH COUNCIL.—Medical Officer and Public Vaccinator for the Southern Division of Harris. Salary £90. Other emoluments. Applications to Mr. T. Wilson, Solicitor, Lochmaddy, Clerk.

HOSPITAL FOR WOMEN, Soho-square, London, W.—Assistant Physician.

KILBURN, MAIDA VALE, AND ST. JOHN'S WOOD GENERAL DISPENSARY, London.—Vacancy on the Board of the Honorary Medical Staff. Applications to the Secretary, 13, Kilburn-park-road.

LONDON COUNTY ASYLUM, Claybury, Woodford Bridge, Essex.—Junior Assistant Medical Officer (male). Salary £150 per annum, with board, furnished apartments, and washing. Applications to the Clerk of the Asylums Committee, 6, Waterloo-place, S.W.

NORTHAMPTON GENERAL INFIRMARY.—Assistant to the House Surgeon for six months. Board, lodging, and washing provided and an honorarium of £25 given.

NORTH RIDING ASYLUM, Clifton, York.—Junior Assistant Medical Officer. Salary £100, rising to £150, with board, lodging, washing, and attendance.

NORTH-WEST LONDON HOSPITAL, Kentish Town-road.—Honorary Anæsthetist for twelve months.

PADDINGTON-GREEN CHILDREN'S HOSPITAL, London.—House Surgeon for six months. Salary at the rate of £50 a year, with board and residence.

QUEEN CHARLOTTE'S LYING HOSPITAL, Marylebone-road, London.—Resident Medical Officer for four months. Salary at the rate of £60 per annum, with board and residence.

ROYAL FREE HOSPITAL, Gray's Inn-road, London.—House Surgeon for six months. Board, &c., provided.

ROYAL INFIRMARY, Sheffield.—Junior Assistant House Surgeon. Salary £50 per annum, with board, lodging, and washing.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Senior and Junior Resident House Surgeons. The Senior for 12 months at a salary of £80 per annum, with board and lodging, and the Junior for six months, at a salary at the rate of £50 per annum, with board and lodging.

STAFFORDSHIRE GENERAL INFIRMARY, Stafford. — Assistant House Surgeon. Salary £30 per annum, with board, lodging, and washing.

STAMFORD HILL AND STOKE NEWINGTON DISPENSARY.—Junior Resident Medical Officer. Salary for the first three months at the rate of £50 per annum and afterwards at the rate of £75 per annum, with board and residence in each case. Applications to the Senior Resident Medical Officer, 189, High-street, Stoke Newington, N.

STOCKPORT INFIRMARY.—Assistant House and Visiting Surgeon. Salary £70 per annum, with board, washing, and residence. Also Junior Assistant House Surgeon. Salary £2 per mensem, with board, washing, and residence.

STOKE-UPON-TRENT UNION.—Resident Medical Officer for the Workhouse. Salary, first year, £100, £110 for the second year, and £120 for the third year, with board, washing, and furnished apartments at the Hospital, subject to statutory deductions. Applications to the Clerk to the Guardians, Union Offices, Stoke-upon-Trent.

VICTORIA HOSPITAL, Folkestone.—House Surgeon. Salary £80 per annum, rising to £100, with board, residence, and washing.

WEST LONDON HOSPITAL, Hammersmith-road.—Assistant Physician.

Births, Marriages, and Deaths.

BIRTHS.

AUSTIN-ROBINSON.—On Feb. 16th, at Durban, Natal, Dr. Lilian, the wife of Dr. Austin-Robinson, of a son (stillborn).

BEECHAM.—On March 22nd, at Hanger-lane, Ealing, the wife of William Beecham, L.R.C.P., &c., of a son.

BIGGER.—On March 23rd, at Aberfoyle, Streatham-common, the wife of Wm. Grimshaw Bigger, M.B. Irel., M.R.C.S., of a son.

GRAY.—On March 25th, at Prescot-road, St. Helens, Lancs., the wife of Andrew Gray, M.D., of a daughter.

LAMBE.—On March 24th, at West-view, Seaford, the wife of Thomas Lambe, M.R.C.S., L.R.C.P., of a son.

LAW.—On March 24th, at The Maples, Sidcup, the wife of Robert Redman Law, M.D. Cantab., of a daughter.

MCSWINY.—On March 18th, at Weymouth, the wife of Fleet-Surgeon McSwiny, R.N., Dorchester-road, of a daughter.

WALKER.—On March 27th, at Dawson-place, Pembridge-square, the wife of Basil Woodd Walker, M.D., of a daughter.

MARRIAGE.

COOK—MADDOX.—On March 25th, at Christ Church, Hampstead, John Howard Cook, M.S., F.R.C.S., youngest son of the late William Henry Cook, M.D., of Hampstead, to Ethel, youngest daughter of Mr. George Maddox, of Gainsborough-gardens, Hampstead.

DEATHS.

COOKE.—On March 22nd, at his residence, Glen Lea, West End, near Southampton, George Richards Cooke, M.R.C.S., L.S.A., aged 61 years.

PORT.—On March 25th, Heinrich Port, M.D., F.R.C.P., of Finsbury-square, E.C.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Mar. 29th, 1899.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Mar. 23	29·77	N.W.	...	54	35	26	Fzn.	30	Overcast
,, 24	29·98	N.	...	79	42	28	Fzn.	32	Fine
,, 25	30·22	S.W.	...	86	50	30	Fzn.	35	Overcast
,, 26	30·24	W.	0·21	74	56	35	46	49	Cloudy
,, 27	29·96	S.W.	.	77	59	41	43	46	Cloudy
,, 28	30·02	S.W.	0·02	85	59	41	48	51	Cloudy
,, 29	29·87	W.	0·02	97	61	50	50	54	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (3rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M.).

TUESDAY (4th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.).

WEDNESDAY (5th).—St. Bartholomew's (1.30 P.M.), University College, (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.).

THURSDAY (6th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.).

FRIDAY (7th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.).

SATURDAY (8th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (4th).—PATHOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—Mr. R. Johnson: Congenital Cyst at the Back of the Tongue.—Dr. Still and Dr. Poynton: Rheumatic Nodules.—Mr. D'Arcy Power: Cystic Disease of the Breast in a Boy aged two and half years.—Mr. T. W. P. Lawrence and Mr. J. Lawrence: Hypertrophy of the Pituitary Body.—Dr. Rolleston: Tumour of Antrum.—Dr. Still: Biliary Calculi in Children.—Dr. Russell and Dr. Buzzard: Paramœcial Cysts in the Liver.—Mr. T. W. P. Lawrence: Atrophy of the Pancreas in Diabetes.

WEDNESDAY (5th).—OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Dr. A. Routh, Dr. Lea, Dr. McKerron, and others. Papers:—Dr. W. S. A. Griffith and Dr. T. W. Eden: Notes of a Case of Puerperal Eclampsia with a Description of a Five Weeks' Ovum removed in a Subsequent Pregnancy.—Dr. Lewers: A Case of Persistent Mento-posterior Position of the Face in which the Child was delivered alive by the Axis-traction Forceps.

THURSDAY (6th).—HARVEIAN SOCIETY OF LONDON (Stafford Rooms, Titchborne-street, Edgware-road).—8.30 P.M. Clinical Evening.

FRIDAY (7th).—WEST KENT MEDICO-CHIRURGICAL SOCIETY (Royal Kent Dispensary, Greenwich-road, S.E.).—8.45 P.M. Discussion on Tuberculosis, with special reference to Treatment (opened by Dr. G. Heron). Short Papers:—Dr. M. Dockrell (President): Tuberculosis of the Skin.—Mr. R. Clarke: Tuberculosis of the Eye.—Mr. M. Collier: Tuberculosis of the Nose and Throat.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY (West London Hospital, Hammersmith, W.).—8.30 P.M. Dr. S. T. Prues: The Open-air Treatment of Tuberculosis.—Mr. H. J. Paterson: The Use of Gas in General Surgery.

LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Cases and specimens will be shown by Dr. StClair Thomson, Dr. Potter, Dr. Donelan, Dr. Lack, Dr. Kelson, Mr. Parker, Mr. De Santi, Mr. Cheatle, and others.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

THURSDAY (6th).—LONDON TEMPERANCE HOSPITAL.—2 P.M. Dr. S. Fenwick: Clinical and Pathological Demonstration to Senior Students.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

SLEEPING SICKNESS.

WE have received the following very interesting letter through Dr. Prosser James. The writer, though not a medical man, is evidently an intelligent observer, and we should say that his theory as to the conveyance of the disease by the agency of the saliva is quite plausible:—

SIR,—I am much interested to see that there are two Congo natives suffering from sleeping sickness at the Charing-cross Hospital. I do earnestly hope that some further light on this terrible scourge will be found. Some of the best of our native Christians have recently fallen victims to it. Dr. Manson has suggested that it is in some way due to the presence in the blood of the filaria sanguinis hominis of the diurnal species and as it is a theory of great possibilities he adheres very strongly to it. I am afraid that the theory he has advanced will tend to absorb attention and let other possibilities pass unnoticed. Personally I feel that it is in some other direction that the source of this mischief must be sought. It has been suggested that the eating of raw manioc (cassava), rich in hydrocyanic acid, is the cause, but that does not in any way account for the phenomena. The disease has newly (comparatively) invaded our district. Its advent was slow and extended over years, but the number of cases is steadily increasing. We heard of it lower down in the Cataract Region, but scarcely ever, if ever, of a case in our own district. Now it is terribly common. I should think that from 4 to 5 per cent. of the population have died from it last year and again this year. I suppose that of the inscribed members of our native church seven have died this year or are hopelessly affected out of 130 members. I would note, then: (1) It comes as a slowly spreading epidemic; (2) the eating to some extent of raw manioc is nothing new; (3) the presence of the filaria in the blood is no novelty; (4) neither is the presence of the mosquito; (5) it must be contagious in some obscure way; and (6) it may lie dormant in the system for many years and then develop.

As to its *contagious* character (1) we had a young man on our station whose sister died from it, and later his mother who nursed her became ill and died from it. The young man feared for his brother and brought him to live on the station with us when his mother began to all. The young brother showed symptoms within six months and died in about six months more. Then the young man fell sick and died from it. He had visited his home when his sister and mother were ill. I believe that a married brother in the town, a smart fellow, leader in public opinion and trading expeditions, died also from it about that time. Many in their town lived in much more of squalor than did they, while the young man in question was well housed and had been for years a cook, well clothed and fed. (2) The senior chief of the Kinsutla district sickened and died from it, then one and then another of the elder chiefs of his own township and district who often met him and joined with him in potations of palm wine sickened and died from the same disease. Indeed, instances could be multiplied of cases like this all clearly pointing to contagion. The Christian church at Mbanza Manteke—whence these lads come, I believe—was not decimated but worse, some 50 to 60 per cent. of the members died from the disease when first it invaded those parts. Nearer to my own home I have passed through large townships and districts almost depopulated by it. It is now working cruel havoc near my own home.

Now as to the means of contagion. The belief of my colleagues at Wathen and myself is that it is conveyed by the saliva. The people drink from the same cup and eat from the same plate and there are abundant opportunities for the conveyance of the saliva by these means. This would account for the extinction of families as instanced above, also for the old chiefs who almost daily shared the palm wine loving cup at the "palavers." Indeed, that seems to have been the only means of contagion, for they do not shake hands there. We believe even that the communion cup conveyed the contagion in the Mbanza Manteke church and in consequence separate any of our people suspected. They are not allowed to partake of the same cup as the rest. We note that those who have nursed cases on our own station under careful instruction by us, such as our dispensary assistants, have not taken the disease, having been careful to wash their hands after contact and never to drink from the patient's cup. We see much that points to contagion by the saliva. I do not know where the bacillus of hydrophobia is to be best found, whether in the saliva or blood of the affected animal, but should be glad if the saliva and saliva glands of the sleep patients could be studied.

As to the onset of the disease, it is generally noted by an unusual drowsiness, but in the cases of our more intelligent and Christian natives the first symptom which has attracted our attention has been some most unaccountable outbreak of passion, some unreasonable display of temper, or where a usually well-behaved man becomes outrageously impudent and unbearable. The suspected patient is morally unbalanced, he will lie persistently that he never sleeps other than at night and so on. Fever comes day by day and the sleepiness becomes periodic. The native doctors are said to cure some cases by most drastic purging and by rubbing pepper into the eyes. The former may be of service. One patient I treated in the early days of our mission seemed to recover after a strong course of purging and iron tonic and returned to the town and home duties, but was killed in the burning of her town six weeks later. So the permanency of her cure was never proved. Another case, that of Nlemvo, who helped me in my literary work—he was suspected of being in the early stages of the disease seven years ago. I treated him with arsenic and it passed away for a while, returning after six or eight months; again the same treatment was resorted to and since then it has not recurred. *Post hoc* or *propter hoc?* Perhaps, indeed, he was only in a low, feverish condition. I do not think that anything can be done for an advanced case by any known means. Indeed, any so-called cures in earlier stages may not be cases of the disease at all. I hope that some new light may come and that a remedy may be found for this terrible disease which has so far baffled those who have studied it.

I am, Sir, yours faithfully,

W. HOLMAN BENTLEY
(19½ years on the Congo).

Wathen Station, Lutete, Cataract Region.

THE HUNTER FUND FOR THE ASSISTANCE OF THE WIDOW OF THE LATE MR. H. KINGSLEY HUNTER, L.S.A.

THE following are the names of the gentlemen who have consented to act on the committee for the management of this fund: Dr. Major Greenwood, 243, Hackney-road, N.E., honorary secretary, Brussels Medical Graduates' Association; Mr. George Jackson, 10, Portland-villas, Plymouth, vice-president (late President), Incorporated Medical Practitioners' Association; Surgeon-Captain R. R. Sleman, 8, Portman-street, W.; Mr. M. Cursham Corner, 113, Mile End-road, E., Member of Council, Incorporated Medical Practitioners' Association; Mr. Joseph Smith, 15, Bath-road, Bedford-park, W., President of the Society of Members of the Royal College of Surgeons of England; and Mr. Rivers Willson, 42, Wellington-square, Oxford, vice-president Incorporated Medical Practitioners' Association (treasurer, and honorary secretary *pro tem.*).

The treasurer asks us to acknowledge the receipt of the following donations:—

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Oxford, March 28th, 1899.

BURIAL AT SEA.

AN able and usually sensible member of the staff of our contemporary the *Referee* has lately been to Gibraltar by sea. The voyage, he says, reduced him to a state of semi-torpidity, but he was aroused from this state by a restless passenger who told him that there had been a death on board and that "they're going to throw the body into the sea at six o'clock to-night. They'll stop the ship for the purpose; it will be worth seeing." Accordingly when he felt the ship stop he proceeded to the spot where the "ghastly ceremony had been indicated as about to take place." In a couple of seconds the ship went on again. The writer then goes on to suggest that as the deceased was only a bath attendant he was buried in a much less ceremonious way than would have been a passenger. A correspondent who is a ship's surgeon of some standing writes to us to say that he has had his attention called to this garbled account, and points out what we should have thought most people

knew. First, that the occasion of the ship's stopping is just before the conclusion of the service when the body is released from the grating, the reason being obvious—namely, to prevent the chance of the corpse being caught by the propeller blades. Secondly, our correspondent points out that the service of the Church is the same for all, high or low. We are unable to see why anyone should take the trouble to write about a necessary and very solemn ceremony in such a manner. There is nothing ghastly about a burial whether at sea or on shore and as a matter of fact a burial at sea is often far more impressive than any burial on shore. That there may be no mistake about the article from which we have quoted we may mention that it appeared in the *Referee* of Feb. 12th, 1899.

"THE THERAPEUTICS OF COMFREY."

To the Editors of THE LANCET.

SIRS,—For the information of your correspondent "W. S." in THE LANCET of March 11th asking particulars concerning the therapeutics of comfrey and chelidonium I have copied out the accompanying notes from an old book on Herbs, published in 1787, entitled "The English Physician: Medicines made of English Herbs that were not in any Impression until This," by Nich. Culpepper, Gent., Student in Physic and Astrology.

"COMFREY.

"The common great comfrey helpeth those that spit blood or make bloody urine. The root boiled in water or wine, and the decoction drank, helps all inward hurts, bruises, wounds, and ulcers of the lungs, and causeth the phlegm that oppresseth them to be easily spit forth; it helpeth the defluxion of rheum from the head upon the lungs, the fluxes of blood or humours by the belly, women's immoderate courses, as well the reds as the whites, and the running of the reins, happening by what cause soever. A syrup made thereof is very effectual for all those inward griefs and hurts, and the distilled water for the same purpose also, and for outward wounds and sores in the fleshy or sinewy parts of the body whatsoever, as also to take away the fits of agues and to allay the sharpness of humours. A decoction of the leaves hereof is available to all the purposes but not so effectual as the roots. The roots being outwardly applied help fresh wounds or cuts immediately, being bruised and laid thereto; and is special good for ruptures and broken bones; yea, it is said to be so powerful to consolidate and knit together that if they be boiled with divers pieces of flesh in a pot it will join them together again. It is good to be applied to women's breasts that grow sore by the abundance of milk coming into them; also to repress the overmuch bleeding of the hæmorrhoids, to cool the inflammation of the parts thereabouts, and to give ease of pains. The roots taken fresh, beaten small, and spread upon leather and laid upon any place troubled with the gout doth presently give ease of the pains and applied in the same manner giveth ease to pained joints and profiteth very much for running and moist ulcers, gangrenes, mortifications, and the like."

"CHELIDONIUM OR CELANDINE.

"Is called chelidonium from the Greek word χελιδών, which signifies a swallow, because they say that if you put out the eyes of young swallows when they are in the nest the old ones will recover their eyes again with this herb.

"It is an herb of the sun and under the celestial Lion and is one of the best cures for the eyes, for all that know anything in astrology know that the eyes are subject to the luminaries. Let it then be gathered when the sun is in Leo and the moon in Aries, applying to this time; let Leo arise, then may you make it into an oil or ointment, which you please, to anoint your sore eyes with. I can prove it doth both by my own experience and the experience of those to whom I have taught it that most desperate sore eyes have been cured by this only medicine, and then, I pray, is not this far better than endangering the eyes by the art of the needle? For if this doth not absolutely take away the film, it will so facilitate the work that it may be done without danger. The herb or root boiled in white wine and drank, a few anniseeds being boiled therewith, opens the obstructions of the liver or gall, helpeth the yellow jaundice; and often using it helps the dropsy and the itch, and those that have old sores on their legs or other parts of their body. The juice thereof taken fasting is held to be of singular good use against the pestilence. The distilled water, with a little sugar and a little good treacle mixed therewith (the party upon the taking being laid down to sweat a little), hath the same effect. The juice dropped in the eyes cleanseth them from all films and cloudiness which darken the sight, but it is best to allay the sharpness of the juice with a little breast milk. It is good in old filthy corroding creeping ulcers wheresoever, to stay their malignity of fretting and running, and to cause them to heal more speedily. The juice often applied to tetters, ringworms, or other such-like spreading cankers, will quickly heal them, and rubbed often upon warts will take them away. The herb with the roots bruised and bathed with oil of camomile and applied to the navel taketh away the griping pains in the belly and bowels and all the pains of the mother, and applied to women's breasts stayeth the overmuch flowing of the courses. The juice or decoction of the herb gargled between the teeth that ache easeth the pain, and the powder of the dried root laid upon an aching, hollow, or loose tooth will cause it to fall out. The juice mixed with some powder of brimstone is not only good against the itch but taketh away all the discolourings of the skin whatsoever; and if it chance that in a tender body it causeth any itchings or inflammations by bathing the place with a little vinegar it is helped.

"The lesser celandine or pilewort is under the dominion of Mars, and behold here another verification of the learning of the ancients—viz., that the virtue of an herb may be known by its signature as plainly appears in this; for if you dig up a root of it you shall perceive the perfect image of the disease which they commonly call the piles. It is certain by good experience that the decoction of the leaves and roots doth wonderfully help piles and hæmorrhoids, also kernels by the ears and throat, called the king's evil, or any other hard wens or tumours."

In addition, I find in the Extra Pharmacopœia (ninth edition) by Martindale, p. 460, a note on Chelidonium Majus, with references to *Brit. Med. Jour.* (Epitome), vol. ii., 1896, p. 88; and vol. ii., 1897, p. 47; *Brit. Med. Jour.*, vol. i., 1897, pp. 25, 354, and 637; and vol. ii., 1897, p. 123; THE LANCET, August 29th, 1896, p. 649; Dec. 19th, 1896, p. 1778; and Sept. 18th, 1897, p. 737; *Pharmaceutical Journal*, vol. i., 1897, p. 86; and vol. i., 1898, p. 61; Ancient Uses—*Medical Press and Circular*, vol. i., 1897, p. 375; some of which may be of service to your correspondent.—I am, Sirs, yours faithfully,

ALFRED HOLLIS, M.D. Edin.

Freshwater, I.W., March 14th, 1899.

"THE STOCKPORT BRANCH OF THE ST. JOHN AMBULANCE ASSOCIATION."

WE have received from Dr. L. M. F. Christian of Stockport copies of letters sent by him to Mr. A. E. Ferns, honorary local secretary of the above-mentioned branch, and to Sir Herbert Perrott, chief secretary of the Association. In the former of these letters Dr. Christian expressly declines to submit for the consideration of the local centre the exposures which he "feels most unwillingly forced to make," as he is convinced of the necessity for having the unbiased judgment of higher authorities. In his letter to Sir Herbert Perrott Dr. Christian makes an appeal for an investigation of the condition of the Stockport Branch by the Central Executive Committee. He also mentions that nearly 90 would-be pupils are waiting to commence a course of instruction in first aid, but he says that he, as a member of the Stockport Medical Society and of the local centre of the St. John Ambulance Association, respectfully declines to conduct these classes until either apologies are offered by certain parties or decided changes are made in the constitution of the local centre. With this resolution formed by Dr. Christian not to continue his useful work until the affairs of the local branch of the Association are put into order we have every sympathy, and in this sympathy every medical man who knows the circumstances that have taken place at Stockport will join.

A Subscriber.—If our correspondent lives in as good or in a better situation as regards the public convenience than does the successor of the resigning officer he can justify his candidature. He has regularised his position by giving the practitioner in question notice and he must decide for himself whether he will compete. If he does he will infringe no law of medical etiquette, but a hard-and-fast line cannot be laid down which will meet every individual case.

R. W. C.—We regret to say that the fee is the legal one when the medical man resides in the city, borough, or parish where the magistrate sits.

Civil Surgeon.—We think so. We will ascertain if the point has previously arisen and if any decision has been arrived at upon it.

T. T.—The condition is very common, as the medical adviser of the child has already pointed out.

Welshman should consult his medical man.

Staff.—Yes.

During the week marked copies of the following newspapers have been received: *Stockport Advertiser, Chester Chronicle, Macclesfield Courier, West Lothian Courier, Birmingham Post, Barnet Press, Dundee Advertiser, Sun, Newcastle Journal, Western Morning News, Sheffield Daily Telegraph, North British Daily Mail, Glasgow Herald, Scotsman, Liverpool Daily Post, Times of India, Pioneer Mail, Architect, Citizen, Builder, Yorkshire Post, Bristol Mercury, The Critic, Manchester Guardian, Munster Express, Leeds Mercury, Soulby's Ulverston Advertiser, Dunstable Borough Gazette, Sussex Advertiser, Surrey Gazette, Newry Reporter, Clifton Chronicle, Bideford Weekly Gazette, Hull Daily News, Gloucester Journal, Aberystwith Observer, Montgomeryshire Express, Warwick Times, Caterer, Sunderland Morning Mail, Stafford Advertiser, Brighton Gazette, Sanitary Record, Flint County Herald, North Devon Herald, Kent Herald, Blackpool Times, Royal Cornwall Gazette, Mining Journal, Reading Mercury, City Press, Hertfordshire Mercury, Local Government Chronicle, Grimsby Times, Lisburn Standard, Evesham Standard and West Midland Observer, Surrey Advertiser, Local Government Journal, The Riviera Daily, Windsor Chronicle, Weekly Free Press and Aberdeen Herald, Berkhampstead Times, Bucks Standard, Pembroke County Guardian, Tamworth Herald, Kent and Sussex Courier, &c., &c.*

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T.—Mr. Tate, [illegible] T. K. W.

U.—Mr. J. Ut[illegible]

V.—Vinolia Co[illegible]

W.—Mr. F. F. [illegible] Mr. E. H. W[illegible] ham; Dr. J. [illegible] Maltby Grange [illegible] County Council; [illegible] Accountant of; W[illegible] brooke House, Alton; W., Alton; Mr. B. [illegible] Manchester; Dr. T. Wise, [illegible] reux, Switzerland.

X.—X., Lond.

Z.—Messrs. A. and M. Zimmerman, Lond.

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